TRAFFIC QUARTERLY

AN INDEPENDENT JOURNAL FOR BETTER TRAFFIC

JULY 1949

Statewide Planning
State Police Training
'Unimportant' Violations
Effective Driver Licensing
N.Y. State's Traffic Commission
Traffic Affects Chambers of Commerce
Town and Traffic Planning in Israel
San Francisco Bay Crossings
Connecticut's Point System
Local-Level Planning

THE ENO FOUNDATION FOR HIGHWAY TRAFFIC CONTROL

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The 'Unimportant' Is Important

AN EDITORIAL

THE reasonable driver expects to become involved with the law if he commits one of the driving offenses generally regarded as serious. Some of the more common "serious offenses" are: collision resulting in serious damage, personal injury or death; running a red light; excessive speeding; ignoring a stop sign; driving while intoxicated, or without an operator's permit.

That type of traffic offense receives the principal attention of enforcement officers and forms the principal basis for statistics on our good or bad driving. For the most part, the number of persons "*killed* annually on our highways" becomes the accident criterion.

The truth is, however, that our usual statistics serve only to compare the most serious consequences of our *worst* driving.

With some exceptions, all other driving offenses—and there are many—appear to be regarded as *unimportant* . . . of minor interest to enforcement officers, and of little importance in driving records.

Yet these "unimportant" offences are violations of traffic law. They reveal significantly our poor driving *habits*—habits that contribute to our worst driving offenses. Thus they become important.

Among them are: incautious passing; cutting corners on turns; straddling, or illegal crossing of center lines; using defective headlights; driving with the high beam in approaching motorists' eyes; and other negligent habits that become serious, sometimes fatal, accidents.

These minor offenses are the basis of state tests to determine our fitness to operate a motor vehicle, yet they seem to give least concern to the operator, the traffic officer and the court.

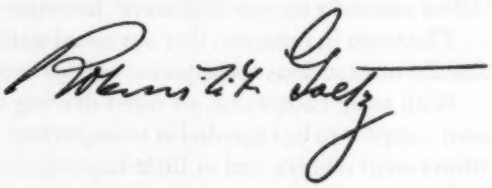
Drivers who violate these rules of the road do so with an air of indifference, often of arrogance. Daily, however, the law of averages catches up with some of them.

The attitude of the police officer varies with the nature of the offense. In serious cases, he is professional and direct, exhibiting the best qualities of his training. With minor infractions he is frequently impatient in his approach to an offender who in turn may

become indignant. Too frequently, neither shows appreciation of the other's problem.

This is an unfortunate situation of common knowledge. Yet it critically affects our property, limb, and life. It stems from conditions that cannot be remedied over-night, from conflicting rules with a wide range of enforcement methods, and with a pernicious type of court procedure.

Unless drivers themselves correct their indifference to "minor" violations that actually are important—and many of them probably won't—enforcement, though carefully reasonable and courteous, will need to be far more meticulous than it is. Otherwise, we shall continue in our nationwide trend toward legal mockery of traffic regulation.



Planning the Statewide System of Highway Transportation

G. DONALD KENNEDY

Mr. Kennedy, a civil engineer, is Vice President of the Automotive Safety Foundation, Washington, D. C. He joined the Foundation on January 1, 1943, after previously having been State Highway Commissioner of Michigan. He had been with the Michigan Highway Department for more than ten years. Mr. Kennedy's earlier engineering work had included a decade in private and municipal practice. In 1942 he was President of the American Association of State Highway Officials. During the war, he was Chairman of the American Society of Civil Engineers' Committee on Postwar Construction. In 1941 he had been named by President Roosevelt to the National Committee on Inter-regional Highways. He served as Vice Chairman of this committee. In 1943, at the invitation of the United States Senate, he made a fact-finding study of postwar highway needs with respect to required Federal Highway legislation. In 1946, Mr. Kennedy completed an engineering fact-finding study for a long-range highway program for the California Legislature, and in 1947 he supervised a review of highway studies for Richmond, Virginia. Studies similar to the one in California were completed in 1948 for Washington, Oregon, Kansas and Nebraska. Mr. Kennedy received the 1948 George S. Bartlett award for outstanding service to highway transportation.

MOTOR vehicle transportation has become so vital to the living of the individual and the family—and therefore to the nation's economy—that the state which today proceeds with highway construction and administrative programs without careful study and long-range programming is certain to find it difficult to avoid waste and satisfy needs.

Since the average motor vehicle is on the road or street from 350 to 500 hours a year, its driver spends the equivalent of eight or more work-weeks of the year behind the wheel as he well may to meet his expanded business, educational and social needs and desires.

That's quite a lot of time out of the year of any citizen. Driving-time becomes all the more impressive when applied to the 41 million

motor vehicles in use and to their 60 million drivers—at least 410 billion work-weeks.

Those facts, however, are merely preliminary to picturing the social and economic dependence of the American people on the motor vehicle. The full field of highway transportation now keeps some 9 million workers, one-seventh of all employed persons, busy in one way or another—in factories, mines, oil fields, in retailing and on the farms. On top of that is the fact that while only a fraction of the total freight is hauled over the highways, almost every bit of it is transported one or more times by truck.

Large cities would starve were it not for this flexible means of transport. And were it not for buses, it would be anybody's guess as to what would happen to the untold millions dependent upon them. The final taxing of comprehension comes when it is realized that in 1948 motor vehicle travel reached some 397 billion miles on 3,300,000 miles of roads and streets. The total cost of highway transportation service was reliably estimated at $30 billion.

With population growth in mind and some increase in the use of the average vehicle, another decade will see vehicle registration increased by four or perhaps five million, and total vehicle mileage swelled by some 60 billion.

A hundred years ago, transcontinental travel for the hardy few involved railroads to the midwest and wagons from there on. Today the motorist, limited only by his pocketbook which need be none too full, can drive with reasonable safety and comfort any place he chooses, even far beyond the nation's boundaries.

The motor vehicle has become the greatest of the nationalizing and unifying forces. For motor travel, state, county and city boundaries do not exist.

The stupendous volume of motor transportation is spread over the nation. It occurs on roads and streets including those under the jurisdiction of some 36,000 separate local units of government. Were each of these local governments to exercise complete independent control over the highways within their borders, highway systems and road conditions as we know them today would be non-existent. Interconnected routes would be few and continuity of improvements would be more a matter of luck than that of intent. Vehicles

would be far fewer, and less use would be made of them. Legal barriers of various kinds would lessen inter-community and interstate travel.

That is not an idle supposition. It could have happened. In fact, that is the way road building started out in the United States. Even up into the early 1900s rural roads were built almost entirely by counties and townships. A few states early realized that full benefits of the motor vehicle could not be obtained unless a central agency assumed jurisdiction over a skeleton system of roads connecting principal towns and cities, but most states were content to supply counties with financial assistance for building whatever roads they choose. When substantial Federal highway aid was first proposed in Congress, one strong group held that aid should be extended not to states but directly to counties.

Fortunately, a broader concept prevailed, and full-fledged state highway departments came into being in every state, and Federal highway aid, launched in 1916, was extended on a matching basis only to states. The states, moreover, were required to establish state highway departments, adequate in authority, equipment and engineering personnel, to assume the responsibility of effectively administering Federal funds. Although at first no limitation was placed on where the money could be spent, the Federal Highway Act of 1921 corrected this omission, requiring designation of primary state highway systems consisting of principal interstate and intercounty roads. Principles written into that sound Act still apply.

Through the years, motor vehicle usage increased by leaps and bounds. Demand for good roads always exceeded the supply. Although it is commonly said that the road efforts of the past were wholly inadequate for the traffic, the truth is that road builders did such a good job that extensive motor vehicle usage was a natural result.

Today's highway problem is one of providing safety and comfort for road users, of expanding road and street capacity for the vehicles, and of enlarging the economic influence and benefits of highway transportation through reduction of travel costs, eliminating delay and extension of improvements. With highway development retarded by a depression and a war, all in the face of continued

growth in vehicle use, the problem faced today is gigantic. It is a problem involving all roads, the general use of primary state or interregional roads, the county primaries and local roads, and the primary and local streets.

Viewed from sheer size alone, it is plain that highway transportation in all its aspects must be the subject of exhaustive engineering study and economic analysis. With more than $30 billion already invested in the nation's roads and streets; with construction costs now nearing $2 billion a year; with maintenance now too closely approximating the construction outlay, and with present and future needs measured in more billions, it is high time to apply the scientific and engineering approach in every state.

Expenditure of such large sums logically points to need for measuring total requirements within the states to ascertain whether headway is being made or whether funds are being devoted to the most needed facilities. States have been going ahead largely with day-to-day plans, hoping to achieve the goal. Too few states have backed off to see exactly what has to be done to get set on an even keel.

Highway study and planning costs money, but the cost is only a fraction of what is now being spent to meet increasing demands, and resultant benefits return the outlay many times over.A dollar spent wisely is worth many dollars spent blindly.

The pattern of highway development has been quite solidly established. States are, in all cases, responsible for the primary state highways, and often for the state secondary roads which are the principal roads connecting with the primaries. Counties are responsible for the balance of rural roads, and cities are responsible for the streets. There are exceptions. A few states control all rural roads. In some cases, townships or road districts handle local roads within their confines.

Must Measure All Needs

But no matter how highway responsibilities are distributed among the various jurisdictions, all of the road and street systems within a state should be studied on a statewide basis. To attack state primary needs, or local road needs or street-needs alone is like setting up a family budget without counting all of the children.

Obviously a problem can't be licked without waste and loss of time unless the size of the problem is known. Likewise, it is clear that improvements in administration and in techniques cannot be made accurately unless existing weaknesses are plainly set forth.

Indicative of the need for covering all highways in the engineering studies is a comparison of progress in county road development. As shown by data assembled by the Public Roads Administration, improvements on county systems range from a high percentage of surfaced roads in a few states to almost a negligible amount in some, one state having only two per cent so improved. On the basis of dustless or better, some states have advanced to the point where less than 10 per cent of their roads are dustless. At least fourteen states still have 15 or more per cent of their county roads in the rudimentary stage where travel means clouds of dust.

In cities, the problem is largely that of providing street capacity. Today, cities, even relatively small ones, are marked with costly, throttling congestion. Main rural roads empty into streets that were never meant to carry the traffic volumes now pouring over them. Express-highways pushing through metropolitan areas and skirting downtown business districts, by-pass routes for trucks and other through traffic, and traffic distribution facilities, are projects that not only cost large sums but are projects which must be carefully located and fitted into the general highway transportation scheme to best pay the inherent high dividends.

Clearly, integrated highway transportation that will best serve the interests of all citizens and all businesses, can change from a dream to reality, only through the medium of comprehensive planning. With extremely good luck and mystic guidance, some agencies might come out with excellent results without a measurement of needs, but the odds are against it.

Since no machinery normally exists in a state for collecting information on county and city road and street conditions, usage and needs, data can best be obtained through the medium of a statewide highway engineering study. Many counties and cities, of course, have done excellent work in studying their own highway problems, but to be of statewide value, the data must be collected on a uniform basis, and in every county and city.

Local roads and streets are an integral part of the statewide highway transportation system. A well-paved, thoroughly modern primary system is of limited value unless it is backed up by an efficient network of feeder routes which tap the agricultural, timber, mining and recreational areas, and which serve the rapidly growing urban and suburban sections.

Actually, a state is nothing more than a collection of towns, cities and villages and counties. A state can be no stronger than the sum total of its component parts. Highway transportation, which binds these many units together, must be viewed in its entirety, for there are just so many dollars available to build and maintain all the roads and streets.

In nearly all states, state collected motor vehicle tax incomes are shared with counties and cities. This sharing is done by a variety of formulas, most of which date back to the early days of road building when needs were entirely different from those of today. In the absence of facts, distribution of funds naturally has been based largely on political pressures and guesses, good or bad.

It is not the job of the engineering study to determine changes in extension of state aid to local governments, for that is a job of the separate statewide financial study which should parallel the engineering study. The latter, however, does perform the extremely useful function of determining the progress or lack of it made on local roads, the degree of effectiveness with which the funds have been spent as indicated by the current inventory, the adherence to engineering standards, and the needs.

Conflicts in highway transportation have long existed between rural and urban people, and between industry, business and agriculture. Actually, these interests are closely intertwined, yet if left unguided by facts, the differences in opinion and the pulling and hauling may prevent or delay progress for all interests.

Finally, there is the matter of Federal highway aid. Beginning with the 1944 Act, substantial assistance is given by the Federal government for the construction of primary state highways, principal secondary roads, many of which are on county systems, and to extensions of routes through cities. Although the required matching money may be supplied by counties and cities on projects involving their jurisdictions, the state highway department is the sole agent

through which the Federal government deals. A portion of Federal funds may be applied to research and planning.

So on the one hand, the state administrative agency has responsibility for expenditure of Federal funds within county and city, on a cooperative basis, of course, and on the other hand funds are available for the conduct of engineering and economic studies covering every mile of road and street in the state. The best road job can be done only when there exists between state and local government the same close working relationships and knowledge as exists between state and Federal government.

The Kind of Planning Needed

Modern highway planning, by analyzing all factors that have to do with highway transportation, has the aim of producing a comprehensive report and guide which will portray highway needs and will outline long-range highway programs for all road systems to adequately meet those needs.

The elements covered include the history of highway development, with particular regard to legislation and to financing of the highway systems; the importance and usage made of highway transportation, with regard to growth, the present situation, expected usage, and present and future traffic operations; classification of the roads and streets; the development of standards, and finally, determination of the highway programs for all classes of roads which is done with consideration to all elements. The work concludes with a review of administrative procedures as a means of establishing the program on the firmest of foundations.

The foregoing sounds like a large order, and it is. Unless all elements are studied and unless the entire picture is seen in clear focus, and has in the background such facts and trends as revealed by the historical study, for instance, then the recommendations rest upon an insecure foundation. In that case there is less likelihood that the recommended program would be adopted.

If the study does not cover classification of roads and streets, then probably less deserving roads will be included in programs at the expense of those of greater importance. If standards for improvement are not investigated and new ones established where needed,

wastes again can be large. If no study of administration is made, then weaknesses and inefficiencies can go on, regardless of the soundness of any construction program adopted. Highway planning has got to be sound every step of the way.

Fortunately, the work of the engineering study is vastly eased by the statewide highway planning studies which were initiated in the mid-1930s by the Public Roads Administration in cooperation with state highway departments. These factual studies, of a continuing nature, reveal the extent of road usage, desired routes of travel, road conditions and many other basic facts. In addition, the Public Roads Administration provides on-the-spot assistance by engineers who have specialized in various phases of fact-finding.

Through the loan of technical staff, the Automotive Safety Foundation has had the privilege of participating in several statewide highway engineering studies. These studies were made in California, where principal recommendations of the study have already been incorporated in the legislative highway program of the state, and in Michigan, Washington, Oregon, Kansas and Nebraska. Studies under way in Mississippi and Ohio are being assisted in by Foundation engineers in accordance with Foundation policies which permit of participation when the statewide highway study committee is responsible to the state legislature and represents state, county and city interests and highway user organizations, and when the engineering study is paralleled with separate finance and administrative studies, with all three combined in final committee consideration.

Since those studies all follow about the same pattern, the brief discussion that follows will be generally descriptive of the subjects covered in the eight studies participated in by the Foundation staff.

Historical Study

The historical review covers all matters relating to the development of the highway systems. A study of legislation brings to light helpful information concerning establishment of systems, physical development, and administrative organization and responsibilities. History reveals relationships between state, counties, and cities and indicates the ways in which the people of a state prefer to approach the highway problem.

Financial history studies, which do not cover future financial policy, find out where highway funds come from, where the money was expended and for what purposes. To determine investment in the state, county and city highway systems, all sources of income are studied, such as general funds, property tax, fuel tax, other motor vehicle imposts and Federal highway aid.

By reason of the financial assistance of the Federal Government, and the cooperative work engendered in standards and research, Federal highway aid is given special attention in the financial portion of the engineering study. Throughout the more than three decades of Federal aid, states and the Federal Government have worked closely together in development of primary and secondary roads, and in more recent years in the development of urban extensions of the rural routes. Since Federal aid has been a major stimulating and correlating influence in highway development, the practical effect of this work is one of the benchmarks in determining the recommended annual program.

Highway Usage

In general it is true that all motorists use all roads. The important things are the extent of travel within and into and out of the state, the traffic volumes on the roads and streets, and the registrations by type of vehicle. Variations in travel by hour, day, week and month must be determined on the various routes. Traffic flow maps are prepared which show the volume distribution. When future projections of the movements are made, they become the underlying guide to road design.

A projection is made of annual travel by first projecting population and vehicle registrations. The travel projection that emerges is not an exact line but a trend judged accurate enough for the purposes of the study, which must be concerned not only with the travel of today but that of twenty or thirty years hence, roughly the life of roads which are built today.

Relation of Highways to State Economy

While it is generally recognized that the economy of all states is closely associated with highway transportation, the size and char-

acter of the highway plant justified are problems not easily solved. States vary widely in natural resources. Old resources may diminish or new ones be discovered or developed. Per capita income and wealth are higher in some states than others. States vary in density of population and in land use. All such factors must be investigated in order to determine the permanency or growth of the state economy—which in turn is of vital concern in annual program determination.

Traffic Operations

Today a great store of information is at hand, yet it is doubtful if any agency can say it has taken all practical steps that will make the best and safest use of present traffic facilities. States, counties and cities are giving increased attention to traffic operations, so that in general it can be said that traffic is being handled better today than at any previous time.

Deficiencies which exist in traffic operations are not always the fault of the highway administrator. State laws and city ordinances are often found a stumbling block. The Uniform Motor Vehicle Code is still far from being generally adopted. The same is true of the Model Traffic Ordinance for cities, and the Manual on Uniform Traffic Control Devices.

Insofar as possible, state highway engineering studies explore the various aspects of traffic operations. A three-step plan of action has been developed:

1. Make the best use of all facilities through application of all traffic engineering devices and procedures, such as signs, signals and markings and traffic routing; 2. Step up present capacity and safety with improvements of a minor nature, including stop-gap and permanent structures; 3. Adopt a long-range plan, founded in fact, to provide major traffic facilities.

Classification

A basic element of the engineering study is the classification of roads and streets. Efficient management and equitable financing are impossible unless the roads and streets are properly classified into logical,

manageable systems, according to the predominant type of service. In all states, roads and streets vary in traffic volume from a few cars a day to those carrying many thousands. To properly assign jurisdictions, and to determine the type of improvement warranted, intensive studies must be made.

This work is facilitated by the preparation of manuals of standards and procedures for the state, counties and cities, worked out by the study engineers in close cooperation with the state engineers involved. These manuals enable the state and local engineers to obtain all the essential facts about the conditions of every section of road and street. Standards, of course, are modified to meet the peculiar conditions of the state. Standards for local roads and streets usually are non-existent, and so considerable effort is necessary to develop satisfactory standards, a work requiring much dependence on the knowledge and experience of local engineers.

By no means in these studies are standards established which would result in immediate replacement of facilities which, although below par, still contain much valuable service. To meet this problem, tolerable standards are established which have the practical effect of continuing in service facilities which may give reasonably good service.

State and local engineers submit their project statements and reports, based on their on-the-spot investigations, to the engineering staff. These are carefully studied, checked and modified as necessary to insure complete conformance with the adopted standards and procedures.

Examination of the project statements and reports enables the engineering staff to determine the validity of established road and street systems and to recommend any desired changes. Aside from system determination, proper classification and application of standards and resultant recording of deficiencies, permit of the programming of improvements according to the priority of needs.

Determination of Annual Program

Annual program determination is a step involving consideration of all information derived in the steps heretofore briefly outlined. The

historical facts, present and projected road use, traffic patterns, the economic needs and prospects, are all fitted into the final recommendations. Coming up to the deficiencies shown by the application of standards to all the roads and streets, there is an infinite volume of analysis work. All mileages not embraced in specific project estimates also are studied to round out the future required program, with regard to anticipated road life and character of present surfaces. Provision is made for any required stop-gap improvements. Importantly, annual maintenance cost determinations are made for each system.

No long-range program can be fully developed unless future costs are considered. In highway construction there are many variables, which are becoming more and more affected by world conditions. However, study of past construction price trends and study of economic trends indicate that today's inflated costs will recede within the next few years. In recently completed engineering studies it has been calculated that the construction price index has reached the peak and will decline until about 1953, when a stable position will be set at about 150 per cent of the pre-war base.

Annual requirements, for all roads and streets including construction, maintenance and administration requirements, are usually presented for periods of ten, fifteen and twenty years. In this way, the state legislature has before it all the facts for making a choice of a program period fitted to the state's ability to finance. Proper emphasis, of course, is placed in the recommendations on immediate needs, which usually occupy a fairly substantial part of the long-range program. In one state, for example, immediate needs compose about 18 per cent of the total program.

Administration

Improved methods of administration and organization have developed over the years which better enable the state, county or city to meet their heavy responsibilities. The engineering study covers administration and makes recommendations deemed necessary for execution of the program. Of particular concern is the need for close cooperation between state, county and city. Motorists today do not

care who builds the roads, just so they are well served wherever they go. Moreover, the broadened aspects of Federal highway aid, with its benefits extended through the state highway department to county and city, point up the urgency of close working relationships between state, county and city, comparable to those which have long existed between state and Federal government.

To obtain close cooperation, in many cases state highway departments should establish a county-city division or work out other means to work closely with local governments, to assist in Federal aid and other projects of mutual concern, and to extend engineering service or advice to the many local communities which do not have adequate technical staffs.

A Continuing Job

The foregoing description of the content of the statewide highway engineering study is necessarily fragmentary. Each of the elements involves exhaustive research. In some cases, particularly in classification, in standards, and in annual program determination, large volumes of calculations are involved. The studies could not proceed without the knowledge and aid extended to the study engineers by the state, county and city engineers. In the eight studies participated in by the Automotive Safety Foundation, the support given the studies has been generous. That support in itself reveals in strongest terms the wisdom of making the statewide study.

But the statewide study is not a one-time operation, even when the recommended program is enacted promptly into law. The planned program should be periodically reviewed and revised, say at ten-year intervals, to fit changing conditions. Of extreme importance is continuing the highway planning surveys by the state highway departments and Public Roads Administration so that the state, counties and cities may stay abreast of road usage, technical advances and needs.

Certainly the huge investments in various phases of highway transportation, and the vast use of facilities, warrant top-level study and management.

Solving the Traffic Problem

ALEXANDER KLEIN

Professor Klein is Head of the Research Institute for Town Planning and Housing at the Technion at Haifa, Jerusalem. He is also Town Planning Advisor of the Jewish National Fund. He teaches the Analysis of Architecture and Town Planning and Housing at the Technion which is the official name of the Hebrew Institute of Technology. At the close of 1948 and in the early part of 1949, Professor Klein lectured at Columbia University on his architectural work. He has been at the Technion in Haifa since 1935. A native of Odessa, Russia, he was a practicing architect in St. Petersburg and the Caucasus until 1920 when political developments in Russia induced him to migrate to Germany. He practiced architecture in Berlin until 1933 when he left Germany to practice architecture in Paris. His architectural emphasis has been in housing projects and town planning. In 1932 he published a book on housing and city planning entitled "Das Einfamilienhaus, Band 1."

WHEN we analyze the historical development of the town, we see how, in times of flourishing civilization, streets and squares were the main scenes of civic life in its social, intellectual and economic expressions.

In each period of history, this multiple function of the street has determined its specific spatial formation: The festive order of the classic forum, the picturesque irregularity of medieval streets, the formal beauty of the Renaissance towns, the pompousness of the Baroque, and finally, the decorative layout of streets from the eighteenth to the early nineteenth century.

The first half of the nineteenth century saw the street lose its traditional values, which became subordinate to technical and economic demands. Industrialization, accompanied by rigorous separation of dwelling and working places, by the growth of towns, and by a continuous increase in street traffic, produced the monotonous, channel-like streets that we know today. Now, the ever-growing demands of motor traffic are leading to a complete dissolution of the three-dimensional character of the street.

As long as only animal-drawn vehicles were in use, pedestrians

could hold their ground. With the development of mechanized traffic, however, and with the increase in number, size and speed of vehicles for both passengers and freight, traffic has practically monopolized the street area and dislodged the pedestrians more and more. No doubt these conditions, which more or less apply to the streets of every town, are equally intolerable to motorists and pedestrians, as well as to those who live and work there.

The driver cannot use his car to best advantage on overcrowded streets. Not only is his attention constantly claimed by moving vehicles of different sizes and speeds, and by crossing pedestrians, but the confusion is increased by glaring advertisements on all sides.

The pedestrian, in turn, feels overpowered by mechanized traffic. He is continually annoyed by passing vehicles, with their noise, dust and blinding lights. He is made tense and nervous by the everpresent traffic hazards.

The residents of such streets, and those who work there, suffer a decrease in their working efficiency due to noise, glaring headlights, and other disturbances. In the immediate vicinity of noisy, traffic-filled streets, neither concentrated work during daytime, nor restful sleep at night is possible.

Methods to remedy such conditions, whether they are traffic safety measures and regulations, or mechanical devices such as traffic islands, signs, and signals, have not proved to be really effective; neither do they promise better results in the future, especially in view of the steady increase in traffic that may be anticipated. This may be therapy, but it is not prevention.

As a result of these general developments, streets can no longer serve men and machines simultaneously, as each requires entirely different conditions (see Comparative Table showing requirements of pedestrian and vehicular traffic).

This chaotic development of traffic, and the growth of towns that was determined mainly by business interests, with the profusion of competing advertisements, have shaped the characteristic image of present-day towns. Once-restful squares have become traffic junctions, once harmonious streets have sunk to the level of mere traffic ribbons, crowded with signs and signals. Thus the street of today has lost its claim to being an important sphere in the material and cultural life of the town dweller.

Comparative Table

REQUIREMENTS OF PEDESTRIAN AND VEHICULAR TRAFFIC

	Vehicular traffic	*Pedestrian traffic*	*Conclusions*
1. Nature of movement and character of road layout.	The movement is strictly regulated; it requires straight roads, allowing for uninterrupted, fluid driving.	The pedestrian—as any living being—does not readily submit to restrictions of his movements; he therefore requires corresponding surroundings.	Tying the sidewalk to the roadway means sacrificing the requirements of the pedestrian to those of the vehicle.
2. Speed.	The speed of vehicles varies and tends to increase.	Man's normal walking speed is constant and unchangeable; it does not exceed about 2½ m.p.h.	Tying the sidewalk to the roadway represents a hazard to the pedestrian which affects his physical and mental well-being, particularly with the increase in the number and speed of vehicles.
3. Gradient of roads.	The vehicle can climb steep gradients on unbroken surfaces.	Man prefers steps to steep gradients.	Tying the sidewalk to the roadway puts the pedestrian at a disadvantage.
4. Scope of daily movements and effect of surroundings.	In a medium-sized town trips are comparatively short, vehicle users are sufficiently sheltered from the rigors of the climate, their physical conditions remain unaffected.	In the same town, the pedestrian spends comparatively more time on the road; he requires a suitable "micro-climate," quiet, pure air, shade, restful lighting, safety.	Tying the sidewalk to the roadway is detrimental to the pedestrian's health. The heat accumulated in the roadway radiates back at him; the dust, glare, and exhaust gases as well as the noise and confusion irritate him.
5. Traffic Planning; Profiles and Intersections.	The increase in number, size and speed of vehicles necessitates constant changes and adaptions of road profiles and complex arrangements at intersections.	In a town of constant size, the pedestrian's requirements for footpaths (as to width and type of surfacing) remain unchanged.	Tying the sidewalk to the roadway is disturbing during repair work, when pedestrian traffic is hindered by the repair work and the latter, in turn, is hindered by the pedestrian. The pedestrian is constantly irritated by traffic signs and signals designed to regulate the vehicular traffic.

It is essential to break away from the traditional concept of the street, to deliver the pedestrian from the turmoil of mechanized traffic, and to find a separate space for his movements and activities and for civic life in general.

The "ailments" of the street are merely symptoms of the disease of the whole town organism, which in its present form and structure no longer fulfills its basic purpose. That basic purpose is to enable inhabitants to pursue their daily tasks in pleasant surroundings, with a minimum expenditure of time and energy. The time and energy required should leave enough leisure for communal and family life, and for individual interests and hobbies.

It is within this wider framework of planning that the town planner and architect has to make his contribution by formulating concrete proposals. Basic principles may be these:

The town must be planned for the benefit of human beings and not of machines. There must be complete separation between pedestrian walks and vehicular roads. The center of every-day life must be shifted from the street—as it is at present—to healthy and secure surroundings.

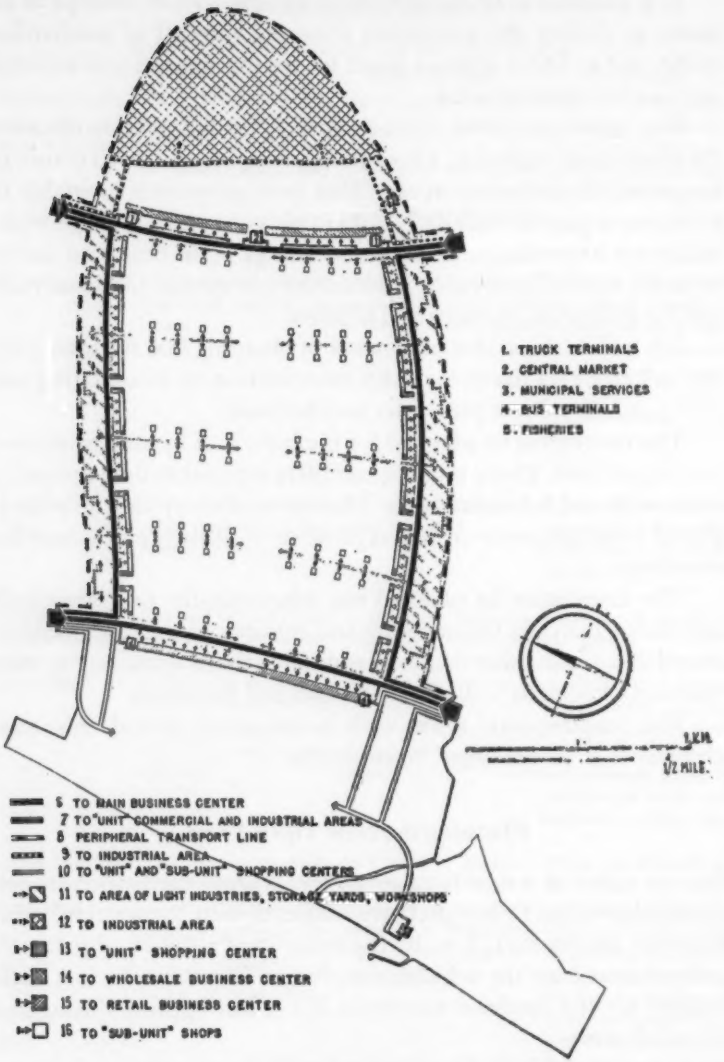
The town must be planned not schematically, but organically and biologically, its ultimate size and number of inhabitants determined in advance. Streets must be differentiated according to their function, as regards width, cross-section and pavement.

The "centri-petal" town, with its congested central area, must give way to a "centri-fugal" town system.

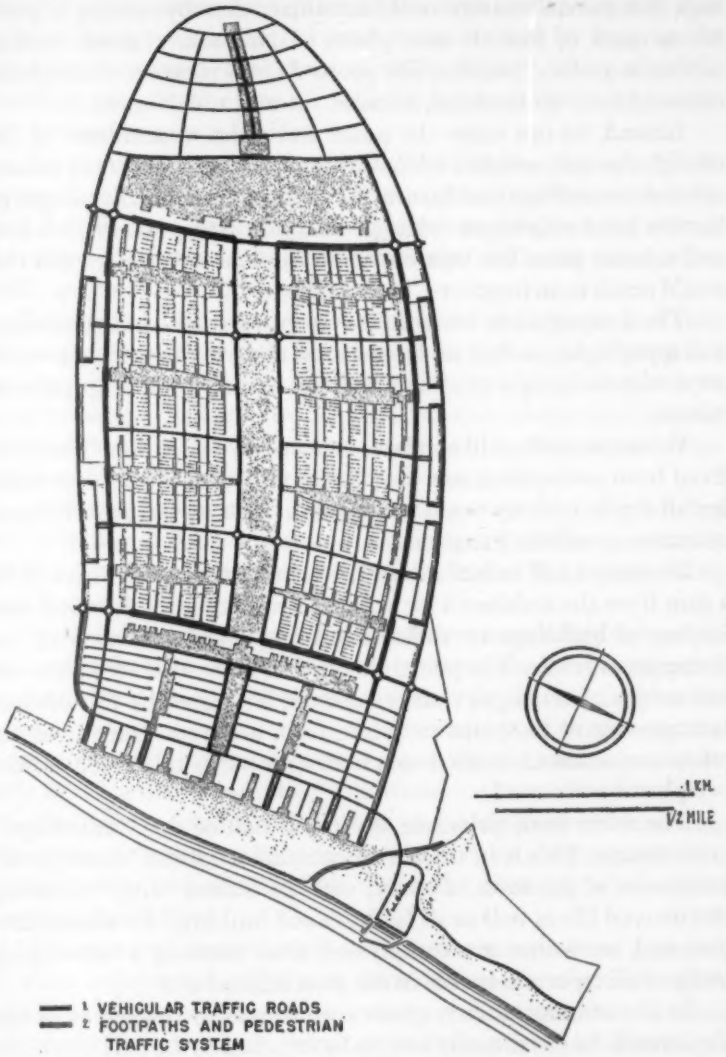
Planning the New Town-Form

We can arrive at a new town-form, based upon the principles presented above, first by complete separation of man (pedestrian) from machine (motor car), i. e., by the creation of a system of footpaths independent from the vehicular roadways. These two distinct traffic systems are not confined to certain areas, but applied throughout the whole town.

In a town of this kind, mechanized traffic is reduced to a minimum. Thus the system of footpaths gains special importance and influences the whole composition. It extends to recreation areas, public build-


1. TRUCK TERMINALS
2. CENTRAL MARKET
3. MUNICIPAL SERVICES
4. BUS TERMINALS
5. FISHERIES
1 KM.
½ MILE.
6 TO MAIN BUSINESS CENTER
7 TO "UNIT" COMMERCIAL AND INDUSTRIAL AREAS
8 PERIPHERAL TRANSPORT LINE
9 TO INDUSTRIAL AREA
10 TO "UNIT" AND "SUB-UNIT" SHOPPING CENTERS
11 TO AREA OF LIGHT INDUSTRIES, STORAGE YARDS, WORKSHOPS
12 TO INDUSTRIAL AREA
13 TO "UNIT" SHOPPING CENTER
14 TO WHOLESALE BUSINESS CENTER
15 TO RETAIL BUSINESS CENTER
16 TO "SUB-UNIT" SHOPS

Scheme of supply and transportation: Passengers and goods are distributed from the periphery of the town, thus resulting in economy and efficiency, and eliminating congestion.



Traffic is organized into two independent, organically developed systems for pedestrians and for vehicular traffic, which interlock without crossing. Where intersections are unavoidable, underpasses for pedestrians are provided.

ings, commercial centers, traffic terminals, thereby making it possible to reach by foot all these places of daily use, without crossing vehicular traffic. Everyday life proceeds in a pleasant atmosphere, removed from the machine, its noise, turmoil and dangers.

Instead, he can enjoy the peace and quiet, concentrate on his thoughts or conversation while walking, or contemplate the beauty of his surroundings and nature. These psychological advantages go hand in hand with improved hygienic conditions: purer air, less dust and exhaust gases, less heat radiation from paved surfaces (all this would result in an improved "micro-climate").

The footpaths can freely follow the diversities of the landscape and topography, as they no longer must cling to the vehicular roadways with their rigid gradients and curves, nor to the alignment of houses.

Vehicular traffic will also benefit from this separation. The road, freed from pedestrians, can provide for fluid and continuous traffic for all types, without over-taxing the driver's nerves by over-tense attention or sudden irritations.

No houses will be built along the main traffic roads. This will be a gain from the architect's viewpoint, as aesthetically the static limitations of buildings are difficult to bring into harmony with the dynamics of traffic. The principle of strict separation of pedestrian and vehicular traffic previously outlined is realized by two distinct systems—one of footpaths radiating from a central green, and another one of minor traffic roads leading towards this green from a peripheral main road.

The other basic principle applied is that of the "centrifugal" town system. This is in deliberate contrast to all the "centripetal" tendencies of the town of today, with its central "city," in which commercial life as well as all facilities and buildings for administration and recreation are compressed, thus creating a converging traffic of all types and speeds in the most limited area.

In the centripetal city, goods are brought to the center of the city, even if they eventually have to be returned to the periphery. An unproductive traffic of goods is created, which constitutes an unnecessary burden and disturbance.

By contrast in the "centrifugal" town only public buildings and facilities for administration, education and entertainment will be

grouped in the central area, planned as a large park. They will thus be near enough to residential areas to be reached by foot, undisturbed by the stream of mechanized traffic. This grouping of public buildings provides the planner with the opportunity for large-scale and harmonious compositions.

All services for the production or distribution of goods will be removed to the periphery of the town (factories and workshops, etc.). In this way, traffic of goods does not penetrate to the core of the town and remains in close connection with the inter-urban traffic net, and railroad stations.

Supplies will be distributed from there, while goods in transit do not pass through the interior of the town any longer. Thus goods and passenger traffic can be concentrated in the outer zone, where large areas are available for the purpose, and where special traffic installations (bus terminals, garages and parking areas, repair shops, etc.) can be harmoniously and logically integrated.

In the future, the outer peripheral ring might serve for landing and parking helicopters, thus preventing air traffic—potentially even more disturbing than automobile traffic—from penetrating into the residential areas.

Another important element of such a town system is a fixed periphery and definition of the ultimate size from the start, as opposed to the present town, which, with its many haphazard outgrowths, sprawls farther and farther into the countryside, thus creating constant administrative and economic problems, and creating unfavorable housing and commuting conditions.

Similarly, the number of inhabitants should be determined from the outset, since, in the interest of a planned, rational organization, it is desirable to deal with fixed quantities, allowing of course for a certain flexibility.

Statistics and research seem to indicate that a town of 50,000 to 100,000 inhabitants is the most desirable size for the economy of public administration and maintenance. The optimum size and shape of a town, however, cannot be arrived at by statistical research alone, but rather as the result of the systematic planning of its economic structure and place within the larger framework of regional and national planning.

Other determining factors are existing local conditions, such as

climate, soil and topography, proximity of sea, rivers, roads and railroads.

These Principles Applied in Israel

An opportunity to apply these principles presented itself to the author when he was given the task of planning a new town in Israel, for the Jewish National Fund. Available was an area of about 67 million square feet (1550 acres), on the shore of the Mediterranean, roughly halfway between Haifa and Tel-Aviv.

The shape of the town was largely determined by the land available—barren sand dunes. The surrounding area, consisting of fertile soil, was excluded from urban development as valuable for agriculture.

The location and preliminary studies of "town-creating" factors resulted in a general scheme including a center for the nearby rural settlements, with adequate trade facilities, and administrative, social, and cultural institutions; also a resort area, fisheries, coastal shipping installations and industries connected with them.

Within the residential area, each neighborhood unit is built "biologically," i.e. each unit contains all the elements that allow for its individual life within the town organism. These include kindergarten, schools, playgrounds, local administrative offices, local shopping, offices, workshops, parking areas, and garages. These latter are located along the edge of the units, thus creating a sort of protective belt between the units and the vehicular roads.

The unit area was determined in such a way that the maximum walking distances from the residences to points to be reached, should not exceed a "budget time" of ten minutes to schools, local shopping, and bus stop; three minutes to "sub-unit" institutions such as kindergarten, daily shopping, playgrounds, garages and parking areas. This differentiation resulted in the subdivision of the unit into "sub-units."

Generally, the distance that may be covered within such a "budget-time" will vary according to climate, topography, and so forth. We may assume, however, that in the organized town—with tree-shaded, level footpaths which do not cross traffic roads—the distances may be longer than in the case of conventional sidewalks

which follow roadways. This is especially true if there is a pick-up and delivery service for the transport of luggage and packages to and from bus stations and parking areas.

These distances do not seem too long, especially in view of the fact that the pick-up and delivery service from and to bus stations and parking areas is planned for in each unit. Number and size of residential units were calculated with these considerations in mind.

The town, built unit by unit, has a chance to develop in an orderly and economic way, and to give to its citizens, through the biological growth of its institutions all the necessities of daily life. Only after one unit has been substantially completed, will a new one be started.

Empty lots and scattered blocks of houses that cause the desolate appearance of so many new settlements, can thus be avoided. Streets, supply and sewage lines can be fully utilized, doing away with the unproductive investments in over-extended municipal services, which were characteristic of earlier speculative town extensions.

As far as the industrial areas are concerned, only disturbing industries or industries requiring special sites (port, railroad) are concentrated in separate industrial zones. Other industrial establishments, not likely to disturb the vicinity, are placed as near to the residential units as convenience of transportation will permit.

Proximity of residence and work not only saves fares, but also energy and time. These can instead be spent upon recreation, education, family life or civic interests. The decrease in public transportation also reduces the risk of contagion in over-crowded trains and buses. It also eases the problem of rush-hour traffic.

The town organism as a whole is planned in such a way that all its elements can fulfill their function with the maximum efficiency and minimum waste, which includes measurable as well as intangible elements (among these time saved, better health, better working conditions, fewer accidents). Economically speaking, the total cost of construction, maintenance and administration of public services is considerably reduced.

Proposed Additional San Francisco Bay Crossings

B. W. BOOKER

Mr. Booker has been with the California State Highway Department for the last twenty-seven years. His experience includes responsibility for surveys, design, construction and maintenance in five of the highway districts in Northern California. For the last seven years Assistant District Engineer and District Engineer of District IV, with headquarters in San Francisco, he has been responsible for the design of the metropolitan freeways and connections to the existing and proposed additional crossings of San Francisco Bay.

THE scope of an article on the selection of the type and location of an additional facility for transbay traffic must necessarily be limited to high lights. The most important considerations of a general nature follow:

1. The geographical position of the highly developed communities surrounding San Francisco Bay, coupled with their large population and industrial growth after World War II, make it imperative that direct and adequate transportation facilities be provided by bridges or other suitable crossings. The most effective locations for such crossings are determined by the potential volume and relative position of traffic reservoirs on both sides of the bay.

The present bridge is located in a favorable position to tap these reservoirs, but it lacks adequate capacity. It has reached a point where traffic congestion threatens to limit the commercial, cultural and social interchange between these communities. Relief must be obtained by a supplementary crossing or crossings.

2. Present populations of communities directly served by the existing and proposed additional facility amount to 750,000 in San Francisco on the West Bay side, and 720,000 in Oakland, Berkeley,

EDITOR'S NOTE: Since this article was written (March 17, 1949) the Department of Public Works recommended, and the Toll Bridge Authority, by unanimous vote, concurred in the recommendation that the Parallel Bridge should be constructed as the first unit of additional San Francisco Bay Crossings, with a Southern Crossing to follow when it could be financed. The

Alameda, Richmond and the six smaller incorporated cities in the East Bay Area.

3. There are four toll bridges across San Francisco Bay. The San Francisco—Oakland Bay Bridge is situated with its western terminus one-half mile south of the San Francisco central business district, its eastern terminus one mile north of the Oakland business district. The Golden Gate Bridge connects the northern perimeter of San Francisco to the mainland in Marin County. The San Mateo Bridge is about seventeen miles south of the San Francisco—Oakland Bay Bridge. It connects San Mateo and peninsular cities with Hayward and southeastern Alameda County. The Dumbarton Bridge, eight miles south of the San Mateo Bridge, connects Palo Alto and neighboring peninsular cities with southeastern Alameda County.

4. Two State agencies are charged with the responsibility of providing and maintaining toll facilities. This responsibility includes the San Francisco—Oakland Bay Bridge and any additional facility that may be constructed, as well as any existing toll facility it may acquire. These agencies are the Toll Bridge Authority and the Department of Public Works.

5. Adequate distribution of the traffic from and to the bridge ends is essential to prevent overtaxing the capacity of the city street systems. It is considered the obligation of the State Highway Department to provide necessary distributing facilities that cannot be provided and included as a part of the toll structure. The credit of the toll facilities, limitation of funds that can be allocated by the State Highway Department, and the legal restrictions upon the scope of both agencies, are important factors affecting this phase of the problem.

6. A system of freeways on each side of the bay has been designed and is being progressively constructed by the State Highway Department. This system is essential in providing inter-city and intra-city service, as well as in furnishing connections to the existing bridge and highways entering the Metropolitan Area. Lateral connections

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meeting at which this action was taken was held in Sacramento on March 23rd. As expected, officials of San Francisco who favor the Southern Crossing are now actively attempting to bring pressure on the civic groups who favor the Parallel Bridge construction, and to carry the fight to the State Legislature and to Congress.

Predicted flow diagram for 1955 estimated traffic that would use the trans-bay structures, provided the system of bridges consisted of the existing structure and the proposed Southern Crossing only. Based on assignment of traffic by travel-time basis with diversion of peak-hour traffic to the Southern Crossing because of congestion on the existing bridge.

to an additional crossing constructed in any feasible location will permit the system to act as an adequate distributor for that facility as well.

7. Comparison of alternate facilities, in order to determine their relative value, should include appraisal of each as to cost, length of time required to provide the facility, financing (including toll rate structure), maintenance, adequacy of approaches with regard to elimination of congestion, conformance with the plans of other agencies, traffic service rendered now and to be rendered in the foreseeable future, contribution to development of the adjacent communities, and national defense.

EXISTING SAN FRANCISCO–OAKLAND BAY BRIDGE

The existing bridge is a high-level, double-deck structure, with a maximum clearance of 226 feet above bay waters. There are six 9'8" lanes for automobile traffic on the upper deck and three 10'4" lanes for trucks and buses, plus two tracks for electric interurban train service on the lower deck. There is no physical divider between the lanes of opposing traffic.

The West Bay structure is composed of twin suspension spans, with anchorages at Rincon Hill in San Francisco and at Yerba Buena Island. The East Bay crossing has one cantilever span and a series of truss spans. A double-deck, single-bore tunnel through the Island connects the West and East Bay spans.

The length of the structure, including approaches, is 8¼ miles, of which 4½ miles lies across navigable waters.

The bridge was constructed by the State Department of Public Works. It was opened to vehicular traffic in November, 1936, and to interurban train service in January, 1939.

The total cost of the bridge, approaches and interurban train facilities, was $78,000,000. It was financed through sale of revenue bonds. The net remaining debt on March 1, 1950, including the repayment of a loan advanced by the state, less reserve fund, is estimated to be $22¾ million.

The toll rate-structure has been reduced from an original 65 cents a passenger vehicle to the present 25 cents. Truck toll rates have

been similarly reduced. Toll charges for mass transit passengers in buses and trains have likewise been lowered from those originally imposed, and are now $0.025 a bus passenger and $0.0175 a train passenger. But the fare per passenger charged by the operating companies is $0.25 to $0.51 a trip, with no reduction for commutation rates as against a 40-ride monthly vehicular commutation of $8.

Passenger travel by interurban train has steadily declined following the end of the war, and vehicular traffic has appreciably increased. The bridge carries an average daily traffic in excess of 70,000 vehicles. Of these 8,500 are trucks and buses. Total passengers crossing the bridge in 1948 amounted to about 42,500,000 by automobile, about 11,400,000 by bus, and 15,600,000 by interurban train—a total of about sixty-nine and a half million people. (These passengers do not include those traveling to and from Treasure Island, or those using free government passes.) It is estimated that 50,000,000 passengers a year could be carried comfortably by the interurban train service.

The principal cause for this trend in the riding habit is the increased time of the mass transportation trip by reason of transfer delay and poor connecting facilities from the interurban train termini to the final point of origin and destination within the cities on both sides of the bay. The unfavorable rate-structure for the total transportation cost by mass transit versus pool riding in passenger vehicles, is an additional influencing factor.

The practical working capacity of the upper deck of the bridge is 3,000 cars in one direction. During peak hours, this is exceeded by nearly 40 per cent. Delays by stalled vehicles and by reduced speeds due to congestion effect a time-loss of approximately ten minutes in the evening peak and three minutes in the morning peak, as compared with off-peak-hour riding. The lower deck is now at about the point of practical working capacity.

The accident record of the bridge, while not unduly high, indicates the potentialities for accidents that exist by reason of the following: heavy peak-hour congestion; three-lane operation on the lower deck; lack of physical divider on the upper deck; narrow lanes on both decks; blind intersection at Yerba Buena Island and on the First Street "On" and "Off" ramps, and the heavy cross-movements

on the mixing lanes of the East Bay Distribution Structure. The 1947 accident rate on the upper deck was 2.12 accidents and 0.0501 fatalities per million vehicle miles. On the lower deck, the rate was 4.36 accidents for each million vehicle-miles.

Toll facilities, consisting of sixteen toll lanes, four of which are equipped with truck scales, are located on the East Bay side. Four additional lanes are currently being constructed.

From the foregoing, it is apparent that present facilities are inadequate for existing peak-hour vehicular traffic. In addition, the approaches—particularly in San Francisco—must be expanded to avoid congestion on city streets and at bridge entrances.

ENGINEERING STUDIES

The complexity of the problem, the huge expense of constructing a modern bridge or tube across the bay, and the importance of the project in the economic and social life of surrounding communities, have created widespread interest. This has resulted in special studies by many agencies, both public and private.

District IV, Division of Highways, under the general direction of John H. Skeggs, Assistant State Highway Engineer, has been intensively studying the transportation problem in the Bay Area for the past seven years. The location of an additional transbay facility, which has long been recognized as requiring early determination, constituted an important part of those studies. The conclusion of these earlier investigations was that a structure paralleling the existing bridge was of first importance in relief of existing traffic congestion and adequate future traffic service.

During 1946, an Army–Navy Board investigated 29 plans for additional bay crossings, held public hearings, and studied all proposals. They concluded that even though the tangible economic considerations favor a central high-level bridge crossing (the Parallel Bridge), the intangible benefits from the construction of a causeway-tube crossing in the vicinity of Army Street in San Francisco to Fifth Street in Alameda (the Southern Crossing), outweigh the advantages of a high-level crossing. They also recommended that a separate rapid transit facility be provided as a third crossing, when the people would

accept it, and when a connecting system of adequate facilities could be provided for distribution within the Bay Cities. A transbay subaqueous tube, in a central location, was recommended for the third crossing. The report of the Joint Army–Navy Board was published on January 25, 1947.

The State Department of Public Works studied the problem during the latter part of 1945 and through 1946, under a directive from the Toll Bridge Authority. Their investigations covered some twelve possible locations. In a report published January 31, 1947, a high-level structure of the same type as the existing bridge, at a location parallel thereto, was recommended. Present and proposed structures were to be operated as two one-way bridges. Adequate distribution facilities at the termini were specified as essential.

While there was disagreement as to the location and type of the additional facility recommended, the studies of the Joint Army–Navy Board and the State Department of Public Works concurred in the following important conclusions:

1. That a second Bay Crossing for vehicular traffic is needed at once.
2. That extensive approaches at each end of any crossing must be provided as an integral part of that structure.
3. That a second Bay Crossing can be financed at this time.
4. That of the proposals for a second Bay Crossing, the best choice is either the Parallel Bridge or the Southern Crossing.
5. That a Parallel Bridge will provide more effective and longer-lasting relief of the congestion on the existing bridge.
6. That the greatest good from a Southern Crossing will be its service to future traffic.
7. That an enlargement of existing transbay mass transportation facilities is not needed at present or for some time to come.
8. That main-line railroad connections into San Francisco from the East Bay are not financially feasible.

Factual data on which the conclusions of both of these reports were based consisted of spot origin and destination surveys made by the state in 1943 and 1946, daily traffic records of the existing bridge, maintained since its completion, foundation data from existing

bridge construction records, and exploratory wash borings on both locations, also made by the state.

Following the publication of these engineering reports, the various sectional groups of the Bay Area engaged in a controversial discussion of the problem. Public organizations met and reported on the subject. The most comprehensive of these reports was the study of the Bay Area Council Committee, membership of which is representative of all sections of the nine counties tributary to San Francisco Bay.

After six months of deliberation and public hearings, the committee's conclusions, based on these studies, were as follows: The overall development of the Bay Area requires the ultimate construction of three additional vehicular Bay crossings—one parallel to the present structure, a second in the vicinity of Army Street, and a third from Richmond to San Rafael. They also recommended that the bridge crossings be built in this order: first, the Parallel Bridge; second, the Army Street crossing; and third, the Richmond to San Rafael bridge.

On November 10, 1947, the Department of Public Works advised the Toll Bridge Authority that the overall development of the Bay Region required two crossings, one parallel to the existing structure; the other, a southern crossing in the vicinity of Army Street. The Authority concurred, and directed the Department to make complete investigation of both crossings, and to report and recommend whether it was (1) feasible from an economic and financial standpoint to construct both at the same time, and (2) if not, which crossing should receive priority of construction. Following that report, the Authority planned to conduct public hearings before the issue was decided.

Subsequent to this action, the Director of Public Works, C. H. Purcell, who has been State Highway Engineer and Chief Engineer of the existing San Francisco–Oakland Bay Bridge during its construction, created a new division within his department. This was designated as The Division of San Francisco Bay Toll Crossings. Mr. Ralph Tudor was appointed Chief Engineer.

The newly-created bridge organization commenced its studies on January 10, 1948. A board of consultants was appointed to advise

in relation to design and construction problems, and a nationally-known firm of engineering consultants on traffic and finance was also retained. Complete borings were undertaken on both bridge locations; a comprehensive traffic study and analysis was made from information furnished by the Bay Area Metropolitan Traffic Survey (described in a later portion of this article); economic studies were undertaken; models of the interchanges were prepared, and plans and estimates were made for both crossings.

A report was submitted to the Department of Public Works in November of 1948. The report recommended first construction of a Parallel Bridge as the best solution to all elements of the problem, to be followed by a Southern Crossing as a future necessity when financing was feasible.

TRAFFIC DATA

In addition to the traffic data included in the earlier reports, more complete studies of present and estimated future traffic were available for the analysis incorporated in the Tudor report. The first was a Preliminary Traffic Report prepared by the Bay Area Metropolitan Traffic Survey, and submitted in June, 1948. The second was a report dated November 1, 1948, compiled by the firm of consultants retained by the Division for traffic and earning studies. Following is a brief summary of the method of inventory and analysis employed in the former report:

The Field Survey

The survey covered the San Francisco Bay Metropolitan Area. The East Bay included all communities from the north limits of San Pablo to the south city limits of San Leandro; the West Bay included San Francisco, Daly City and a part of Colma.

The survey was conducted by the state in cooperation with the U. S. Public Roads Administration and the municipalities in the Bay Area. Field work, begun in the spring of 1946, was completed in its main essentials by the summer of 1947.

Travel data were collected Monday through Friday in four operations, as follows: (1) The Internal Survey consisted of a five per cent sample of all dwelling units in the area of the survey. Previous-day trip by each member of the family was recorded, as well as trip infor-

The area contiguous to the bridges. The location of the proposed parallel bridge, of the proposed Southern Crossing, and the location of the existing San Francisco Bay Crossings.

mation relating to the type of vehicle used (including mass transit), purpose, time of day, parking, and control points passed. In addition, house-hold and vehicular ownership information was inventoried. (2) The External Survey was accomplished by stopping motorists at fifteen cordon stations where traffic entered or left the area between 6 A.M. and 10 P.M. Information was obtained regarding the origin and destination of the trip, its purpose, and the route followed. (3) The Truck and Taxi Survey consisted of gathering logs of travel for one out of every seven trucks and taxis in the area. (4) Bus travel was developed from City of San Francisco data and schedules of operating companies. In addition to the foregoing, ground counts were made on all major streets, as well as cordon counts of the business districts of San Francisco and Oakland, and speed and delay studies of the bridge, existing freeways and street traffic.

The accuracy of the study was checked by reconciling trips obtained from the Origin and Destination survey to actual counts made at the control stations. The checks varied from 100.22 per cent for 24-hour transbay crossings to 79 per cent at the Alameda screen line. The peak-hour figures were in closer agreement for the less reliable check stations.

Approximately 1,740,000 trips by taxis, passenger automobiles and trucks occur within the area of the survey on a typical 24-hour week-day; of these, transbay trips comprise approximately 4 per cent of the total. The table following shows the type and approximate number of trips found under each of the categories indicated. The size of the sample varied for each phase of the field study, as indicated by the figures given in the table.

Table III

SUMMARY OF ORIGIN AND DESTINATION DATA

Type of Interview	*Number of Interviews*	**Number of Vehicular Trip Cards*	*Number of Expanded Vehicular Trips*
Dwelling Unit Interviews	27,700	58,000	1,159,000
Truck Interviews	7,160	47,000	352,500
Taxi Interviews	226	13,000	91,300
External Interviews	93,800	93,800	137,200
Totals	128,886	211,800	1,740,000

* Number of persons interviewed totals 167,000.

The survey is believed to be an accurate inventory of present-day travel, both by vehicle and mass transportation. It contains a wealth of traffic information—basic data for the solution of future transportation problems.

Method of Estimating Future Traffic

Expansion of present traffic to a future date was based on economic studies to develop trends of population growth, motor vehicle registrations and vehicle use, with full recognition of land-use changes and other factors that would affect the estimates.

For the transbay traffic predictions, the survey area was divided into seventy-three units of living and non-living areas of like development and traffic-generating characteristics in the West Bay, and forty-seven areas in the East Bay.

The expansion factor assigned to each area was the result of the economic studies previously described. Frequent consultations with the local planning agencies and interested civic groups resulted in a modification, in many instances, of factors initially assigned.

External traffic was expanded from state-wide economic studies, combined with analysis of the recognized effect of development of the near-by Bay Area Counties. The estimated 24-hour week-day vehicular transbay traffic developed from these studies was as follows: 70,000 in 1947; 95,000 in 1955; 107,000 in 1960; 124,000 in 1970.

Trip Analysis

The next step in the analysis was that of assigning predicted trips to the existing and proposed additional facilities. A precise analysis based on travel time over competing routes was first prepared. The total time of the trip from origin to destination over each of the crossings and a system of freeways, expressways and streets (assumed to be in operation in the year of prediction) was compared, and the trip assigned accordingly.

The system of freeways selected was based on plans of the State Highway Department, and of the Bay Area Cities and Counties for the future development of the region, as well as on an appraisal of

the funds available to each. Certain facilities within the limits of financing of the Division of San Francisco Bay Toll Crossings were included with each structure.

The analysis based on the foregoing indicated that 89 per cent of the total transbay traffic would be best served by the Parallel Bridge, and 11 per cent by the Southern Crossing. Recognizing the fact that congestion during peak hours would cause a diversion from the existing bridge to the Southern Crossing, all of the upper deck traffic in excess of 3,000 vehicles an hour in one direction was deducted and assigned to the Southern Crossing. This figure was obtained from capacity studies, and represented a loss of three minutes in travel time as compared to off-peak hour.

In addition to the foregoing, and in order to eliminate the possible claim of biased opinion, all trips showing less than ten per cent of additional crossing time were deducted from the existing bridge route and assigned to the Southern Crossing. A figure of 10 per cent for 1955, and of 20 per cent for 1960, of the Southern Crossing traffic was then added to the Southern Crossing assignment for generated trips by reason of a new facility.

The net result of the assignment of trips by travel-time basis, including induced and generated traffic, was as follows:

Existing and Southern Crossings in Operation

	Existing Bridge		Southern Crossing	
Year	*Veh./week-day*	*% Total Transbay Traffic*	*Veh./week-day*	*% Total Transbay Traffic*
1955	76,000	79%	20,000	21%
1960	83,000	76%	26,000	24%

Note: Comfortable peak-hour capacity of this system of bridges will be reached in or before 1960, thus necessitating consideration of provision of additional facilities.

Traffic Consultants' Report

The report of the consultants—an analysis independent from that previously described—arrived at comparable figures for distribution of traffic between the existing bridge and the proposed Southern

Crossing. Their estimate of total transbay traffic, however, was more conservative. When we consider the purpose of the two reports, one of which was to ascertain that there would be ample facilities to take care of the highest estimated traffic demand, and the other to insure that the toll revenue would retire the debt, the difference is understandable. The consultants' report estimated the percentage assignment of total transbay traffic to the Southern Crossing as follows: 21.46 per cent in 1955; 23.21 per cent in 1960; 23.94 per cent in 1970. Their estimate of total transbay traffic was from 10 per cent to 15 per cent less than that of the Bay Area Metropolitan Traffic Survey report for the years 1955 to 1970. The year 1960 was given as the estimated date when the bridge system (Southern Crossing and existing bridge) would reach comfortable capacity.

The conclusions of both traffic reports were the same, in that both recommended the first construction of the Parallel Bridge, with the Southern Crossing to follow when traffic demand and financial considerations would permit.

FINANCING

Since there is no disposition on the part of the Federal or local governments to share in the cost of an additional Bay Crossing, the following assumptions are made: 1. The additional vehicular toll crossing will be financed with funds borrowed from private financial interests or from the Federal Reconstruction Finance Corporation. 2. The security offered for such a loan will be the combined revenue from the existing bridge and the new crossing. 3. The cost of additional facilities and the remaining debt on the existing bridge will be combined in financing required for the system of transbay crossings. 4. There will be great opposition to any considerable rise beyond the present level of the toll structure.

The studies of the Division of San Francisco Bay Toll Crossings and their consultants indicated that: 1. The combined cost of the Parallel Bridge and the Southern Crossing greatly exceeds the total amount of bonds that can be sold. One of the two structures must precede the other. 2. The Parallel Bridge can be financed by maintaining the present 25-cent toll. 3. The Southern Crossing construction would require raising the toll to 35 cents.

TERMINAL FACILITIES

A great deal of study was given to the provision of adequate distribution facilities at the bridge and crossing termini. The general approach was to select a site along the margin of the heavily congested central business district and connect it with existing established facilities to provide for wide dispersion of traffic throughout the area.

Traffic predictions were assigned to the proposed ramps in accordance with the desire lines established by the Origin and Destination traffic studies. The capacity of the street system to absorb the traffic, in addition to local movements, was checked against the theoretical flows. The distribution system was then adjusted to eliminate points of potential congestion.

In San Francisco the design of the terminal posed the most difficult problem. It was necessary to consider the effect of traffic from the existing bridge, that brought into the area by the Bayshore Freeway, and that from the additional bridge facilities and local movements. The final design provides a distribution structure, connecting to the existing bridge and Bayshore Freeway, that is capable of distributing estimated 1970 traffic with less congestion on city streets than that which now exists.

The system is so designed that adequate connections to both Parallel Bridge and Southern Crossing are possible. Future extension to the north, around both the easterly and westerly margins of the expanded central business and commercial area, is provided for in the design.

The present bridge has three points of exit and entrance in the vicinity of First, and two at Fifth Street, three-quarters of a mile westerly thereof. The recommended terminal would have six points of entry and exit to the management area (vicinity of First Street) and eight additional points extending from First Street to South Van Ness Avenue, a distance of two miles along the southerly margin of the heavily-traveled area. In effect, an eight- to ten-lane elevated freeway, with a system of distribution ramps, will feed into a system of city streets regulated for one-way operation and restricted parking.

A model of the terminal facilities in San Francisco, designed to distribute the bridge and Bayshore Freeway traffic along the southern margin of the expanded Central Business District.

The selection of one or the other of the locations compared for additional bay crossings will make no difference in the effect of traffic congestion on the city streets. Since the passenger must travel from point of origin to point of destination, the effect of the location of the bridge is merely to provide the most convenient route of travel.

ECONOMIC SERVICE TO AREA

The economic justification of transportation facilities for the movement of goods and people, such as have been discussed here, is considered to be the saving in time, as well as the added convenience and safety to those making the trip. On the basis of this premise, the development of the entire area is measured by how well one or the other of two competing routes will accomplish this purpose.

The comparison of the traffic service which would be afforded to the whole area by the Parallel Bridge and the Southern Crossing, indicates that the former should receive priority of construction, since financial and other considerations preclude the construction of both at this time.

The first construction of an additional facility in a new location (the Southern Crossing) would not drain sufficient traffic from the existing bridge to make it serviceable for those desiring to use it. The existing facilities which best serve over 80 per cent of the trans-bay traffic should be improved as the first additional unit.

It should be recalled at this point that the expansion factors applied to the individual areas on both sides of the bay reflect the potentialities for increased future traffic-generating capacity within each area. An additional increment was estimated and included for the generation of traffic by the facility in a new location.

NATIONAL DEFENSE

Comparison of the effect of each of the proposed additional crossings with respect to the national defense has been vigorously debated. Following are the conclusions on this subject reached in the Tudor Report:

"From a study of reliable data and discussion with experienced military personnel, it is concluded that:

"a. Bay crossings would not be primary targets in the event of war;

"b. Destructive damage to a single bridge would be difficult to achieve;

"c. Destructive damage to one of the three subaqueous tubes of the Southern Crossing is somewhat more likely than to a bridge; however, simultaneous destructive damage to all three tubes from existing bombs is only a remote possibility;

"d. The possibility of simultaneous destruction of parallel bridges from any existing bombs, except an improbable close hit by an atomic bomb, does not exist;

"e. There is no possibility of simultaneous destruction from a single bomb of any kind now known to the existing San Francisco–Oakland Bay Bridge and a Southern Crossing tube;

"f. Sabotage of any single crossing is possible but not likely if adequate and proper precautions are taken.

"Insofar as service to military installations in the Bay Area is concerned, the only appreciable advantage lies to the Navy in that a Southern Crossing would afford direct connection between the Alameda Naval Air Station and the San Francisco Naval Shipyard at Hunter Point.

"From the foregoing it is concluded that the Southern Crossing is preferable from a national defense standpoint but that the margin is small. The hazard of simultaneous destruction or serious damage to parallel bridges is so unlikely that a Parallel Bridge should not be eliminated in favor of a Southern Crossing if the latter does not serve transbay traffic within reasonably comparable limits."

TUDOR REPORT

A comprehensive engineering and economic report, based on reliable traffic and foundation information, was submitted to the Director of Public Works by Chief Engineer Tudor in November, 1948. The report comprises 144 pages of written data and includes seventy-five exhibits. It covers all aspects of the problem in detail. Only the main points in dispute by proponents of one or the other of the crossings have been described in the foregoing.

RECAPITULATION

Factors Contributing to Recommendation

	If Parallel Bridge Is Built First	*If Southern Crossing Is Built First*
1. Estimated date when congestion will be effectively relieved on San Francisco-Oakland Bay Bridge	March 1954	Never*
2. Estimated date when San Francisco-Oakland Bay Bridge and new crossing will both be inconveniently congested	Not before 1970	1965
3. Proportion of transbay traffic best served by each crossing	82%	18%
4. New traffic induced because of improved service (in percentage of total transbay traffic)	None	1%
5. Will produce additional general congestion on city streets on either side of Bay	No	No
6. Two-way traffic on existing bridge will be discontinued	Yes	No
7. Passenger autos, trucks and buses will be mixed in same traffic lanes on new crossing	No	Yes
8. Will produce most revenue and estimated additional net amount per year	...	$20,000
9. Total estimated construction cost including approaches, right of way, and engineering	$155,014,000	$178,421,000
10. Estimated annual cost of maintenance and operation	$1,772,500	$2,214,100
11. Estimated earliest date for financing	March 1950	March 1951
12. Time of construction to serve traffic	4 years	5½ years
13. Earliest date to open for traffic	March 1954	Sept. 1956
14. Minimum toll required to finance	25¢	35¢
15. Amount of insurance that can be obtained on existing bridge plus new crossing, over and above present insurance	10%	15% to 20%
16. State legislation required	No	No
17. Federal legislation	Desirable	Desirable
18. Department of Army permit for navigation clearances required	Yes	Yes
19. National Defense	...	Preferable
Recommended order of construction	1	2

* Until Parallel Bridge is built as a third crossing.

The recommendations included in the report, and summary of factors contributing thereto, are quoted as follows:

It is recommended that:

1. The Parallel Bridge, together with the approaches on both sides of the Bay as described herein, be built at the earliest practicable date;
2. The construction of the Southern Crossing be deferred until it can be financed as a third Bay crossing.
3. In order to assure construction of the Parallel Bridge without delay, provision be made to increase tolls on the existing and new bridge to not exceed a 35-cent base rate when the new bridge is opened to traffic, if this increase is found necessary to finance the cost.

PRESENT SITUATION

The Toll Bridge Authority held a public hearing in Sacramento on November 16, 1948, at which the report and recommendations of the Chief Engineer of the Division of San Francisco Bay Toll Crossings were presented. All interested parties were invited to attend and set forth their views. Representatives of the City and County governments, as well as civic groups in the area, responded and made oral and written statements for the record, to assist the Department of Public Works and the Toll Bridge Authority in their deliberations.

Following the publication of the Tudor Report, the newspapers, civic groups and local governmental officials, have engaged in vigorous, and at times, acrimonious debate relative to the problem.

At the present date, March 17, 1949, on the West Bay side, the City of San Francisco officials, as well as a number of the newspapers and civic groups, are in favor of the Southern Crossing. A number of influential organizations, such as the Chamber of Commerce, the Real Estate Board, and the North Central Improvement Association, are on record as favoring the Parallel Bridge. On the East Bay side, the sentiment of the newspapers and the more populous cities favors the Parallel Bridge. The Bay Area Counties most affected by the additional crossing location, with the exception of San Francisco, favor the Parallel Bridge.

The state authorities have taken no official action to date, although a decision is expected to be reached shortly.

I believe it has been the experience of most of us who have been in the administrative branch of public works for many years, to expect some opposition to any public project. Such opposition usually arises from certain groups who are influenced more by personal interest than by the benefit to the community at large. Yet, there can be an honest difference of opinion concerning a problem such as we are discussing.

We believe it to be the duty of public officials charged with the responsibility for the work to endeavor, in so far as is possible, to present the facts to the public. Only in this way will there be any assurance that public opinion is based on accurate information rather than on misrepresentation or confusion as to the principles involved.

The action of the state agencies in deciding the issue, and the reception of that decision by the people of the Bay Area, will be a most interesting final chapter.

Connecticut 'Points' Them Out

COLONEL ELMER S. WATSON

Colonel Watson has been Commissioner of Motor Vehicles for the State of Connecticut since June 7, 1945 when he was appointed to the post by Governor Raymond E. Baldwin. He was re-appointed Commissioner of Motor Vehicles on January 15, 1947 by Governor James L. McConaughy. Colonel Watson is Vice-President of the Eastern Conference of Motor Vehicle Administrators of the American Association of Motor Vehicle Administrators. He co-operated with Dr. Herbert J. Stack of New York University in the preparation of clinical material for a study on Accident-Repeaters carried on in 1948 under a research grant from the Eno Foundation. A preliminary report of this research was published by the Eno Foundation last year.

JOE weaved against the bar, downed his ninth double shot, and spun around to his companions.

"B'by now, boysh. S'long ol' palsy-walsies. Gotta be gettin' along home, home, Home on the Range. B'seein' you. G'by now."

A companion remonstrated. "Look, Joe, you better not drive home right now. You're pretty well boiled. You might get into an accident or get nailed for drunken driving. Let one of us take you home."

"Nobody's gonna nab Ol' Joey," he retorted. "Ol' Joey's too smart for those guys with the blue, blue suits and shiny buttons.

"O, dem golden buttons," he carolled, "O, dem brassy buttons—dey ain't gonna shine no more, no more, 'specially around Ol' Joey. Good Ol' Joey!"

Joey was in Police Court next morning. Little devils worked inside him. He remembered something about a police car with a siren—and about a cell door with a rattle. More distinctly he recalled the fright that engulfed him when he awakened in the cell block, tenanted largely by bums and bugs.

Questions crawled through Joe's muddled, aching head. Had he killed or injured anybody? What was the charge against him? Would they send him to jail?

It was all over in a few hours. Joe was home with his wife and

children. They had planned to go to the seashore in the family car that day. But Joe had lost his driver's license for a year and been convicted of drunken driving. He had been fined $120, with $40 remitted because it was his first offence and he had a large family. Also he had collected *ten points* against his previously good record in the files of the Connecticut State Department of Motor Vehicles.

Two Other Cases

Mrs. B— is a middle-aged woman, a leader in her social circle. Ordinarily she is a careful driver. But that afternoon when the policeman arrested her for violating a through-traffic Stop sign, her mind was on her social schedule. The court fined her $3 and the Motor Vehicle Department chalked the first two points against her driving record.

Or take the case of Jonathan K—, an industrious, sober man, but a careless driver. In our departmental files we had one point registered against him after he had been warned by a policeman for driving in excess of a posted speed limit.

One afternoon, Jonathan was driving casually along a rural road and nonchalantly passed a standing school bus that was discharging pupils. An alert state policeman arrested him. The court fined him $50, and he added two more points from our department.

Connecticut's Point System

What about these "demerit" points? What do they mean? How and why did these drivers collect them?

We believe we have something new in Connecticut. We are convinced that we have made definite progress in our continual campaign to help prevent traffic deaths, injuries and accidents.

Our Point System has been in effect since July 1, 1947. It is one of seven major programs sponsored by the department towards the goal of ever-fewer traffic mishaps and tragedies.

Other major programs, in brief, are these:

1. The Voluntary Inspection System, by which Connecticut-registered motor vehicles may be inspected without charge at some 1,000 state-certified public garages.

2. The nationally first, special test at the Connecticut Driver's Clinic, whereby we have sought to determine the personal characteristics that create accident-free and accident-prone drivers.

3. The "Lite-A-Bike" Campaign, sponsored jointly with Connecticut's American Legion posts to provide more than 50,000 bicycles with reflectorized tape to help prevent automobile-bicycle accidents during dark hours.

4. The Teen-Age Driver Study, made in cooperation with the State Board of Education and its representative, Raymond A. Lumley.

5. The Accident-Age-Group Study, conducted with New York University's Center for Safety Education, under the supervision of the Center's director, Dr. Herbert J. Stack.

6. The Television Safety Education Program for alerting motorists and pedestrians to numerous traffic hazards created by various weather conditions, careless driving practices and congested travel situations.

Let us return to our hypothetical drivers:

We notify Joe that his driving license has been suspended for one year, after which he may apply for its reinstatement. Simultaneously, we place ten points against his record in our files.

Mrs. B— will not hear from us, unless she collects one or more points to add to the two she received for passing the stop sign.

Jonathan will get a letter from us, a friendly letter, because he has accumulated three points against his driving record.

The letter to Jonathan will be like this:

"Dear Sir:

"The violation recently added to your driving history has been called to my attention. I feel sure that a friendly warning at this time will be of benefit to you, to your fellow drivers and to the community.

"Under the Driver Clinic inaugurated in this department you have accumulated a score of three points. If your total reaches five points it will become necessary for you to appear at this office for a conference. A check on your driving habits would undoubtedly eliminate the necessity of any further action.

"If you would like to review your record with a member of our Driver Clinic, please feel free to call upon us."

I will sign the letter as Commissioner of Motor Vehicles.

A driver charged with three points is sent the warning letter. The letter calls his attention to his standing with our department and informs him that the addition of two more points will make it necessary for him to attend our Driver's Clinic for a conference.

Such a conference is a friendly man-to-man talk with a skilled representative of the Clinic, where we make every effort to help drivers like Jonathan to correct their careless driving habits. These drivers may be asked to check their driving knowledge and ability by taking one of our special tests. Perhaps eye tests will be suggested, or their bad driving faults will be explained to them. In all cases, the Clinic representative courteously and carefully reviews their driving histories for their own benefit.

Our Clinic representative hears all kinds of excuses. "That last notation shouldn't have been speeding, the cop didn't like me." "Even if I had binoculars, I couldn't see that secret stop sign, and neither could you." "That last accident wasn't my fault at all, but the other guy was related to the judge."

How Points Are Allotted

Here is the way we evaluate points:

	Points
Fatal accident involvement if held responsible	10
Drunken driving	10
Evading responsibility	8
Racing	8
Operating under suspension	7
Reckless driving ($50 fine or over)	6
Reckless driving (less than $50 fine)	4
Speeding	3
Passing standing school bus	2
Violating rules of the road	2
All other convictions for moving violations	2
Police or MVD Inspector's warnings	1
On proved complaint of moving violation	1
Accident involvement responsibility, no conviction	1

This scale of points is subject to change as experience requires or indicates. Speeding, for example, would be increased from three points to perhaps four or five points if this violation were to become more serious or more frequent. Thus the point value of the items may rise or fall in accordance with their respective effect on highway safety.

Since Jonathan is, for the sake of this example, an admittedly careless driver, we'll assume he collects two more points and is called to the Clinic for conference. Our conference agent tries hard to lead Jonathan towards better, safer driving practices. But you know Jonathan, and pretty soon he has reached the six-point mark.

We now recognize him as a menace to himself and others on the highways. Jonathan at this juncture is summoned before our Hearing Section, where license-suspension action is taken. Our MVD hearing officers handle these advanced Clinic cases along with their regular duties, all without having to engage additional personnel.

We insist at all times that warned or summoned drivers be given every opportunity to question our records against them. This was explained in detail recently in a feature article by Allan Keller in the *New York World-Telegram:*

"At this Clinic the driver gets a chance to trot out the facts as he sees them, including gripes at policemen, complaints against hard-to-see traffic lights and why he thinks some accident or misdemeanor was not his own fault.

"His facts are checked and if he is right, a correction in his record is made. Many a traffic light has been moved and in a few cases responsibility has been shifted from one driver to another."

As each new addition to Jonathan's driving record is marked on our Master File, an MVD clerk "scores the record" for the last five years and enters the total score on the face card of the file. The conferences and hearings are scheduled in conformity with the number of accumulated points against each such Jonathan.

Because hearings are for more serious records, Jonathan's failure to answer a hearings summons would result in the immediate suspension of his license, even though he had only six points against him. In cases of the less serious "friendly conference" for five points, Jonathan and others like him would be sent a second invitation to a

conference if they failed to appear after an initial invitation. However, Jonathan and these others would have their licenses suspended if they failed to appear on the second invitation.

One-fifth Causes Four-fifths of the Trouble

We established the Point System when we learned that most of the accidents and violations reported to us involved comparatively few of the some 800,000 Connecticut-licensed drivers. In fact, about 20 per cent of these drivers are responsible for over 80 per cent of the records the department keeps in the master file.

This is in line with the experience of authorities in other states keeping such records. Contrary to the opinion of most erring drivers, the great majority of automobile operators are never involved in accidents, are never arrested for motor vehicle violations and are never, in a lifetime of driving, stopped by a policeman to be given an official warning.

Our Point System, therefore, was set up to reach this small percentage of careless or criminal drivers who have little or no regard for the rights and lives of others on the roadways.

I firmly believe that the successful operation of our Point System is proved by the fact that less than 125 drivers failed to heed our warnings during the first eighteen months of the system's operation. These derelict drivers were, of course, summoned to show cause why their licenses should not be suspended. All of us connected with the Point System are convinced that the plan has gained the respect and cooperation of those drivers we have been deliberately trying to reach.

Clean Record for Five Years Wipes the Slate

A driver may have his record erased from the Point System files simply by being a good accident-free, violation-free operator for five consecutive years.

Both officially and personally, I am interested in the repeaters, those drivers who continue to be involved in accidents or convicted in courts. These drivers graphically demonstrate the statements by Dr. Stack that "violations are symptoms of accidents to come."

Another type of dangerous driver is that operator who declares, "I drive so many miles a year that it's impossible for me not to be picked up for some infraction." Many leading Connecticut police and traffic authorities contend, and I support their contention, that the more miles a man drives the better driver he is and should be and the safer driver he is and should be, provided he constantly practices every rule for safe driving.

Safe driving rules are not involved or complicated. They are based on good, old-fashioned common-sense and courtesy. The same common-sense and courtesy that dictate our deportment in our everyday, cordial family and social relations should be the basis for our driving and walking practices.

We do not wish to deny the driving privilege to motorists. We are more concerned with finding out what is wrong with their driving and assisting them to make the necessary correction and at least pointing out or suggesting where corrections or improvements can be made.

As mentioned earlier, the few drivers who are not able or willing to cooperate, and continue to add to their records, soon feel the suspension power of our department. It is gratifying, however, to be able to report that Connecticut drivers have apparently accepted this plan and the scoring, and have shown a remarkable spirit of cooperation.

After receiving our warning, one driver wrote: "In addition to answering my questions you have sold me on the merit of this new system." Another wrote: "I am in full accord with your efforts and you may be sure that my record will stop right here."

Still another stated, "I cannot help but feel that our state is indeed fortunate to have within its government a Motor Vehicle Department which is interested in more phases of automobile driving than simply issuing registrations."

Many other letters of this type are in our files. The fact that the record can be removed after five years of good driving, giving a driver something to strive for, may account for some of this cooperation. The fact that no one is singled out, since the system is an impersonal screening, undoubtedly recommends it.

As the Point System reaches the end of its second year, nearly

140,000 records have been screened and something like 10,000 drivers have received the warning letter. Over 1,500 have been called for conferences and 2,000 have been summoned for a hearing.

A study of the first eighteen months of this system shows that drivers in the 20 to 30 year age group are the most frequent offenders and that ages 22 and 23 are the worst. This study seems to show, however, that the 'teen-age driver is not quite the offender that his older brother is.

There is considerable interest in this phase of our Point System, and age-group studies are now being made by Dr. Herbert J. Stack and the Center for Safety Education at New York University.

We are proud of our department, but we are more proud of the Connecticut drivers who, by accepting their responsibilities on the streets and highways, have enabled us to maintain and improve our record for safe driving. To these drivers belongs the credit for Connecticut's enviable safety record.

New York State Traffic Commission

R. C. GEORGER

Mr. Georger has been Director of the New York State Traffic Commission since July 1, 1939. He organized this commission in 1936. From May 1942 until October 1945 he was Director of the War Transport Committee of the New York State Council. From May 1942 to June 1943 he was also secretary of the Metropolitan Defense Transport Committee. Previously from 1908 to 1912, Mr. Georger engaged in general engineering, drafting and survey work. From 1912 to 1915 he was in charge of contracts on barge canal work. In 1916 he was transferred to the Division of Highways. The following article, describing the composition and functioning of the New York State Traffic Commission, was prepared on invitation from the Eno Foundation.

In 1937 the New York State death rate in motor vehicle accidents was 13.9 per 100 million vehicle miles traveled. With the exception of several of the war years, this rate declined in each of the succeeding years until in 1947 it was down to 7.3.

At the time of this writing, complete figures for 1948 were not available, but the rate for the first 11 months in 1948 was 6.3 and there is no reason to believe that statistics for the entire year will show a material change in this rate. In spite of New York's great concentration of population and traffic, its accident rate is below the national average.

This continuing improvement in traffic safety is not unrelated to the fact that the New York State Traffic Commission came into being shortly before the beginning of 1937 and since that time has played an active part in regulating traffic in the state and the standardization of type and use of traffic control devices throughout the State.

Reduction in the death rate from 13.9 to 6.3 can not be attributed entirely to the activities of the Traffic Commission. Other factors have entered, and the national trend has been downward. The Commission would be the last to claim entire credit. Nevertheless, the Commission enters its 13th year of operation with assurance that no small part of this reduction of more than 50 per cent in the

death rate per 100 million miles of travel is due to its work, and considers it to be evidence that its policies and methods are based upon sound principles.

The task of understanding the agencies and procedures used by the different states to regulate and protect traffic is complicated by the differences in the governmental structure of the states, by their different types of governmental subdivisions, and by the fact that the name of a subdivision in one state may carry an unlike meaning in another.

For example, in one state, a town may be a geographical subdivision of a county. It may be sparsely settled or it may contain closely built up communities. In another state, a town may mean a built-up community having a legally defined boundary and its own municipal government. Another difficulty is presented by differences between the states in jurisdiction over the construction and maintenance of the various highways within the state.

In New York State there are four governmental subdivisions: the county, the town, the city, and the village. Each of these has its own governing body. Cities, villages, and towns have certain authority to regulate traffic within their boundaries, subject to the general State law.

Excluding city and village streets, which are under the jurisdiction of the respective municipality, the highways are either on the state system, the county system, or the town system. State highways may pass through villages but, except in a few special cases, they do not enter the cities. This last, however, will shortly be changed when the state program for the construction of arterial highways through cities gets under way.

The Commission's Jurisdiction in New York State

The State Traffic Commission has complete authority over the erection, use, operation, and removal of all signs, signals and markings on the state system of highways and for the establishment of specifications and standards for the design and use of these and other traffic control devices. It also has authority to regulate speed, parking, and to establish other necessary regulations on the highways.

In the case of speed, it may establish on the state highways limits either lower or higher than the state-wide absolute speed limit of 50 MPH. To date it has not exercised its power to set speed limits higher than 50 MPH, this authority having been given to it to provide the flexibility which will be necessary to obtain maximum efficiency in the use of the new super highways which the State is planning to build.

Outside of the cities and villages, the State Traffic Commission is the only agency within the state that may regulate speed. Upon request of the authorities of a town and the County Superintendent of Highways, it may establish speed limits on highways on the Town and County Systems. These speed limits may be established on a linear basis, i.e., by individual road, or on an area basis. In this latter case, the Commission determines the boundaries of a closely built up community, which is then made a matter of legal record, and restricts speeds on all highways within the boundaries. It will be noted that the result is much the same as the restriction of speed by a city or village.

It possesses numerous other powers and responsibilities. It may regulate parking on any highway intersecting or meeting a state highway for a distance not to exceed 100 feet from the highway. It may erect Stop, Warning, and other signs upon these highways to regulate the entrance of traffic into a state highway.

It may regulate parking on the town and county systems in towns not authorized by law to establish their own parking regulations, but only upon the request of the town authorities endorsed by the county superintendent of highways.

One of the Commission's duties is to review and approve village ordinances affecting vehicular and pedestrian traffic on state highways. Not the least of its responsibilities is that of advising and assisting local officials with their traffic problems and promoting the adoption of uniform ordinances and traffic control devices throughout the state.

It has a number of other functions, but those stated are sufficient to indicate the wide scope of its activities and the responsible part which it plays in the regulation of traffic and in obtaining the most efficient and safe use of the highways of the State.

The Commission's Personnel

To carry out these duties adequately and efficiently requires the best thought and experience of more than one field of endeavor. In creating the Traffic Commission, the Legislature directed that it consist of the Commissioner of Motor Vehicles as Chairman and administrative head, the Superintendent of State Police, the Superintendent of Operation and Maintenance of the Department of Public Works, and the Associate Commissioner of Education in charge of safety education.

By virtue of its membership, the Traffic Commission brings together the Bureau of Motor Vehicles, the Division of State Police, the Department of Education, and the Department of Public Works. These are the state departments concerned with the safety and operation of motor vehicles, the construction and maintenance of the highways upon which they move, the enforcement of the laws and regulations governing their movement, and the regulation and education of drivers. It coordinates their activities in the field of motor transport. Its policies, operations, methods and decisions are based upon the best judgment of the operating heads of these four agencies, who view the situation from angles which are widely different, but all of which have to do with the safety and efficiency of motor vehicle operation.

The technical staff of the commission consists of the director and four traffic engineers. All have an adequate background of highway engineering, developed through practical experience in design and construction, both in the office and in the field. In addition to these, the Department of Public Works maintains one or more traffic engineers in each of its ten districts, and the Division of State Police maintains a traffic supervisor in each of its seven troops, all of whom conduct investigations and submit reports to the Traffic Commission.

With approximately 83,000 miles of rural highways in the State —13,000 miles are on the state system—this force is hardly sufficient to enable the Commission to keep abreast of its work. Proper consideration, however, is always given to each of the multitudinous problems that present themselves. Careful and courteous attention is

paid to the many letters received each day from officials and citizens throughout the state, asking advice and assistance in their traffic problems and reporting conditions which in their opinion require corrective action. The volume may at times be so great that it is not always possible to handle it as promptly as could be desired, but this is not permitted to lower the high standards the Commission has set for itself.

Functioning of the Commission

The Commission has decentralized, as far as practicable, many of its activities. An example would be the use of accident records in traffic engineering work. Several authorities hold that these should be maintained by a central agency. For a number of reasons this is desirable, and it is entirely practical in the smaller states. It is not feasible, however, in a state the size of New York, with its large motor vehicle registration and its immense total of vehicle-miles traveled. The Bureau of Motor Vehicles, which receives and analyzes reports of all accidents except those involving less than twenty-five dollars property damage, transcribes on 5 x 8 file cards the pertinent information necessary from a traffic engineering standpoint. These are sorted in the office of the Traffic Commission and forwarded to the appropriate District of the Department of Public Works.

Here they are filed according to location and route, and are available to the district traffic engineer and the traffic supervisor of the state police. They are also readily available to the Traffic Commission, since all reports of field investigations submitted to the Traffic Commission contain the accident history of the location in question, which is obtained from these cards.

The Commission has adopted standards for the various types of traffic control devices, and specifications for their use. In the case of many of the signs covered by these standards it has authorized the Department of Public Works to install them without reference to the Commission, provided the conditions for which they are used and their method of use conform to the standards prescribed in the Commission's Manual.

Much of this sort of work is handled directly by the district traffic engineer in consultation with the traffic supervisor, and

obviously it relieves the Traffic Commission of a very considerable amount of detail. In all cases of a more serious nature, however, a complete traffic survey is made by the District traffic engineer and the traffic supervisor, either on their own initiative or at the request of the Commission, and reports and recommendations are submitted. These are studied by the staff of the Commission, and appropriate action taken.

A total of 1027 traffic surveys was made and studied by the Commission in 1948. This figure does not include cases that did not require reference to the field and that could be handled by data in the Commission's files, nor investigations initiated by the district traffic engineer and the traffic supervisor that were not referred to the Commission because action was taken locally in accordance with specifications prescribed in the Manual issued by the Commission.

All cases involving exposure of school children to traffic hazards in which preliminary study indicates a possible conclusion that no action is necessary, are referred to the State Education Department. That department reviews the situation in the field from the school angle and submits its comments to the Commission. These receive considerable weight in the final decision.

The Commission has recently reviewed its standards for the design, location and use of signs, signals and markings. They have been revised, brought up-to-date, improved as found necessary, and issued as a New York State Manual of Uniform Traffic Control Devices. In general they conform to national practice except where improvements were considered desirable, and with such modifications as are necessary to meet New York State law and practice.

In order to obtain uniformity throughout the state in traffic regulation and the use of traffic control devices, copies of the manual have been sent to officials of all counties, towns, cities and villages. They have been informed that full-scale prints of all signs listed are available to them without charge. There are approximately 57 counties, 930 towns, and 605 cities and villages in the state.

Correspondence already received since the distribution of the manual shows a lively desire by local officials to follow state standards. The Commission is optimistic about the probable results.

The State Traffic Commission, carrying a heavy burden of re-

sponsibility, is always aware that every one of its decisions, however relatively unimportant, affects the safety of persons who use or live along the highways. The Commission operates as an engineering organization, and is advised by experts in the field of enforcement, education, and motor vehicle regulation. After twelve years of experience with its operation, and speaking from a fairly broad background of highway engineering and administration, the writer is convinced it is the best instrument that could be set up to handle the traffic problems in the State of New York.

Local Level Planning in California

FRANK D. FARGO

Mr. Fargo was appointed Associate Planner for, and Secretary to, the Stanislaus County (California) Planning Commission last February. Previously he had been Assistant Planner with the Solano County Planning Commission in California.

PLANNING is essential in any endeavor. This has been an accepted fact for all of us, in daily life and in business. But we have not planned consistently at any level of our government from city to federal.

Past generations thought only of the moment; they were never forced to plan. The serious depletion of our natural resources and similar other wastes have been due in large part to too rapid expansion and to thinking of tomorrow and not the next decade.

Planning is not a panacea, but it can show the way to improvement. Where it is at all effective, planning cannot help but strengthen us nationally and locally.

Today planning is gaining greater stature at all levels. In all parts of the United States recognition is being given to the fact that we can have greater health, safety and cleanliness in our communities, and can, through giving direction to growth and development, control an improved environment for ourselves and for future generations. The most important group to effect this at the city or county level, is the Planning Commission.

This group, made up of local representatives of the community, appointed by the local legislative body, is in touch with local problems. Such an agency, meeting regularly, can serve as an effective funnel of pressure in the community by recommending certain objectives and by describing certain methods to attain those objectives.

Planning must be accepted at the *local* level to be effective and to be accepted at *higher* levels. This article is to suggest a procedure for such action, and to survey planning development in California.

In The Beginning

California has had city planning from the first arrival of Spaniards in 1769. The King of Spain by royal decree set forth certain standards for the towns of the New World. By this decree industries with obnoxious odors were located downwind, according to prevailing winds; and all business was faced on a central plaza. The beginning of *organized* planning in California was delayed over a century until shortly after 1900 when several of the California cities, San Francisco and Los Angeles among them, decided to have plans drawn for their respective areas. A few years later, Los Angeles instituted the first land-use zoning in the United States by dividing the business district into seven industrial districts with the remaining area designated as residential.

Courts upheld this ordinance in 1911 when a laundry was excluded from a residential district. The judge cited the state constitution as having granted to the municipalities the right to adopt regulations to protect the public health, safety and general welfare of its people under the police power.

This was an important decision in the development of local planning. It should be understood that cities and counties as lesser political subdivisions must derive their powers from the state. The state constitution should give municipalities the power to zone or determine land use in their jurisdictions. State enabling acts, however, can provide these powers where they are not included in the constitution of the state.

Legislative Action

The California State Legislature early recognized that continuing action must be taken to insure steady progress toward planning objectives, and in 1915, passed an act enabling cities to establish Planning Commissions. This act prescribed the organization and functions of such commissions. Many cities took advantage of it. By 1927, when the legislature extended the enabling act to counties, fifty-one cities had established planning commissions.

In 1922, the county of Los Angeles felt that an agency established

for the purpose of furthering planning objectives would benefit the county in many ways. Theirs was the first county planning commission established in the United States and preceded the state enabling act by five years.

The 1927 legislation had certain faulty sections and only one county, Santa Barbara, took advantage of this statute. In 1929, the phrasing and content were greatly improved. Eighteen more of California's fifty-eight counties hastened to establish Planning Commissions. This legislation was entitled the Planning Act of 1929. It not only set forth the organization and functions of city, county and regional planning commissions, but suggested that a staff, consultant or other specialists be retained for technical advice and that certain objectives be considered.

Among suggested objectives were master plans for : Conservation, Land Use, Recreation, Streets and Highways, Transportation, Transit, Housing, Community Design, Public Buildings and Public Service Facilities. The act did not prescribe any parts of the master plan as most important but left it to the judgment of the respective planning commissions to determine those parts most important in their jurisdiction.

The act was amended at several of the following legislative sessions including 1937 and 1945. In 1947, the act was extensively revised and renamed the State Conservation and Planning Act. This is the major enabling legislation for planning at the city and county level in California.

The Legislature has also seen fit to pass several other acts with regard to planning. These deal with various individual subjects and, combined, serve to illustrate California's interest in all phases of planning.

The Park, Recreation and Parkway Districts Act passed at the 1947 session provides for the formation, in the unincorporated area of any county, of a parkway, recreation or park district. Thus the county is enabled to secure the land, buildings and equipment necessary to create and maintain adequate park and recreational areas.

The Community Redevelopment Act, passed in 1945, recognizes that there are "blighted" areas in the state and offers a method,

through the creation of a redevelopment agency, adoption of suitable plans by the community concerned, and the issuance of bonds, by which the blight may be removed and the area or areas redeveloped.

This act has provoked much discussion and has yet to be fully utilized by any community. San Francisco has gone farther than any other locality in the state and has recently created an urban redevelopment agency that operates separately from the planning commission and contemplates redevelopment in an area fifteen blocks square called the Western Addition. Los Angeles is a step or two farther back, but has gone almost as far in their plans. The act has incited great interest. All communities of the state are looking to the degree of success that San Francisco or Los Angeles can achieve in improving the poorer areas of their cities.

The Public Works Planning Act, passed at the special legislative session in 1944, recognized that the Postwar period would find many parts of the state in dire need of public works: streets, highways, bridges and other public facilities. The act also implies that possible unemployment could be counteracted through these beneficial construction projects, operated where possible by local or county officials.

The Water Resources Act of 1945 created a water resources board to investigate and report upon flood danger and control, storage and use of the state's water resources in the public interest.

The Subdivision Map Act enables cities and counties to control the growth and development of their respective areas through control over subdividers. This is an extremely important act that is utilized by many communities to create and maintain certain standards for their area such as width of streets, size of lots, proper drainage, easements, water, sewer, power facilities, and other applicable conditions which may apply to the subdivision under consideration.

The people learned by the mistakes and guile of some of the subdividers of the 1920's. Today a subdivider must be responsible and must perform certain conditions. Subdivisions with their twenty-five foot lots and neglected fire hydrants standing as mute reminders through the depression period taught a beneficial though wasteful lesson.

Those acts and the Riding and Hiking Trails Act, the Ocean Beaches, Beach and Cliff Erosion Act, the Protection of Beds of Mapped Highways Act, the Parking Districts Act and the Planning and Research Act are significant of the interest that California and its legislature has placed upon planning in its various manifestations.

Even more significant is the fact that these acts do not all create agencies to rule over the cities and counties. The locality is enabled to establish its own plans to control the factors of environment in its own community: land usage, recreation, zoning, transit, streets and highways, etc.

Philosophy and Scope

Planning in California takes place at all levels of government. Planning commissions can and do lend invaluable assistance to the State by performing adequately and by fostering local responsibility and initiative. This expresses a concept rejecting any desire on the part of the state to regulate or regiment the lives of individuals. All groups, working at their own levels, give a reliable guarantee of continuous progress.

California planning has taken the long initial step forward. Only one-half of one percent of the population of the state is now without local planning agencies. Almost two hundred cities now have active planning commissions and fifty-three of the state's fifty-eight counties have likewise established planning commissions. More and more cities and counties are working on portions of their master plans. This signifies the degree of importance given to planning by local communities today and indicates that it will be a permanent and increasingly important part of that level of government in the future.

A commission educated to the technical process of planning uses an essentially straightforward method in reaching their objectives: (1) Bring all of the facts together; (2) Note the past mistakes and take advantage of the lessons learned; (3) Determine desirable objectives for the future; (4) Formulate a *general* plan to reach the desired objectives; (5) Take action. Don't draw plans to file away. A plan cannot be an end in itself but rather a means to an end. The orderly process well grounded in facts will bring the best results in planning.

Local Commissions—Functions and Organization

City and county planning commissions in California are formed primarily of laymen with city or county officers or employees as advisors. Lay members must be in the majority. Many commissions, to increase their services, have found it advisable to employ a staff to administer the zoning ordinances or land use plans and to gather facts and prepare data for their meetings.

Where more skilled advice than the staff can supply or where extensive field surveys are necessary, a consultant is retained. Cities and counties that have developed the farthest have found that the staff and the consultant are indispensable.

The local legislative body is enabled by the act to levy a tax of two mills on the dollar or 20 cents a $100 of assessed valuation to defray the expense of the planning commission. Members may receive compensation of up to $10 a meeting, but not to exceed $50 in any month plus reasonable traveling expenses incurred in connection with the commission's activities.

Members of the commission and of the staff are directed to keep themselves informed with regard to planning matters. They are to draw a *general* plan for development of the community, emphasizing the phases most important in that locality. As an example, a metropolitan community may consider transit their most important problem and may give it their first attention. A resort community, on the other hand, may feel that recreation is the part of the master plan that applies most properly to their locality. Other portions are considered in their order of importance.

When a part of the master plan is being considered for adoption, a public hearing must be held followed by the approval of the planning commission. It is then forwarded to the legislative body for another public hearing and their action. Positive action by the legislative body makes this the official Master Plan or a portion thereof. It is general and broad and as time passes and the need arises, more precise actions may be taken.

To cite a case, a municipality may adopt a land use plan as part of the master plan. This may designate existing land usage in the various parts of the area. Following that, it would be logical for the commission to consider precise zoning of the area in line with the

general statements of the land use plan. Precise zoning would designate particular use of certain determined areas and would delegate the various uses to the most appropriate localities with regard to all factors.

When changes or additions to the master plan are suggested, they are first referred to the planning commission, then passed on to the legislative body. Public hearings are held by each group.

Another major function of the commission, where the city or county has adopted a subdivision ordinance, is to pass upon proposed subdivisions. The planning commission must approve, conditionally approve, or disapprove subdivisions within thirty days after submission of a tentative map by the subdivider. If no local subdivision ordinance has been adopted, this authority is vested in the legislative body.

Often the legislative body can accomplish broader understanding of a particular project by referring it to the planning commission for study and recommendations. Plans for proposed public works within the locality are also submitted to the commission for their study and a report thereon. This is especially useful with regard to the location of new schools, and closer coordination at this point offers great benefits.

Finally, the planning commission is not intended to be the only planning agency in the community, but rather to be the only *official* agency. Numerous other agencies are asked to offer their suggestions. Local service clubs are expected to offer advice and help create interest. The chamber of commerce often offers valuable assistance. Also, citizens committees can broaden the cross section. The most useful form of planning is that which has heard all sides of the question before the decision was reached.

SUMMARY

California is no longer a state composed of the city of San Francisco, the village of Los Angeles and a series of small towns spread over the sunny slopes and valleys of its 155,652 square miles. California is now a state with a population of more than ten million and still growing.

Over three million of these people are in the metropolitan area of

San Francisco and nearly four million "Angelenos" live in the vast Los Angeles region. Obviously, these factors have stepped up the pace of all governmental activities, and planning has not lagged. While the congestion, the inadequate housing, and like problems have assisted many planners in their attempts to increase the benefits that planning can bring, these same factors have slowed other planners in some localities where the people have not yet begun to realize that present conditions can become *permanent* and *potential slums* unless a plan to bring order is evolved and acted upon.

There are many types of planners. The housewife plans her budget for next week. The businessman tries to compute his sales for future periods and attempts to control his inventory accordingly. The farmer rotates his crops to maintain fertile soil. City councils and boards of supervisors inspect the proposed budgets of department heads so that they can keep taxes at as low a level as consistent with re-election and at as high a level as consistent with providing the adequate service of good government. The professional planner makes it his business to see that available resources are used in the most economical and practical combination.

The professional planner is essentially practical. He realizes that planning cannot solve the immense problems facing it unless interest is developed, financing is available and legislation and legislators are sympathetic to the motives and methods of planning. The broadest base of education and experience is necessary to enable the planner to make planning serve the people and their communities in the best manner possible.

The development of planning in California has had its greatest development in the last fifteen years. It has accomplished much, but its potential accomplishments are much greater. The problem is not ended with the establishment of a planning commission; it goes much deeper. Interest must be developed along desirable lines and groups must be encouraged to work together.

Public relations must be considered and the education of the entire group be furthered to assure the broadest support for all objectives. The opposition must not merely be quelled; it must be won over. Public welfare must become everyone's business. Toward these desirable objectives, California planning is directed.

A recent trend is the introduction of planning into school curricula. The University of California has inaugurated a new department of Civic Planning under the capable guidance of T. J. Kent, Jr., former Director of the San Francisco Planning Commission. The University of Southern California contemplates increasing the number of courses offered in planning.

Los Angeles uses in their schools a book written especially to inculcate planning ideas in children—: "Cities Are For People" by Mel Scott. The Bay Area Council, a coordinating group composed of representatives of nine of the Bay Area counties, has proposed that a similar text be written for the Bay Area schools.

Increased interest in planning, combined with California's tremendous growth and development, is healthy. The future of California is bright with possibilities. By providing orderly means for this development, all of the people will be benefited.

Selection and Training Are Basis of New Jersey State Police Work

COLONEL CHAS. H. SCHOEFFEL

Colonel Schoeffel has been Superintendent of the New Jersey State Police since September, 1941. He had previously (since 1921) served in the State Police in various ranks and grades including those of major and deputy superintendent. He is Past Chairman of the State and Provincial Section of the International Association of Chiefs of Police.

HIGH STANDARDS in public relations have developed a public confidence that has contributed in great measure to the success of the state police organization in New Jersey. Since the inception of the state police movement, courteous treatment of the public and recognition of the privilege of protecting and serving the citizen have been the basis of the public relations program.

Operations have been conducted on the principle that no asset can be more valuable than public confidence and that no police work can be successful without it. Strict adherence to this principle has characterized state police activities.

The state police officer is constantly in contact with the public. The efficiency with which he handles his job, his fairness and impartiality, his understanding of human values and his desire to be of service to the citizen are evidenced by his every act. They form the general impression the public gains of his organization. The trooper is the mirror that reflects policies, principles and efficiency because in the eyes of the public he is the sole representative of law and order in the many delicate situations in which he is placed in the performance of his daily duty.

The rights guaranteed in the Constitution, the fair and impartial treatment that may be accorded by the courts can be meaningless if the individual state police officer does not put into daily practice the principles of justice upon which our system is founded.

The first state police organizations were confronted with the problem of distributing a limited number of men over vast areas.

Economy of personnel was a necessity. Every man had to be thoroughly reliable, trustworthy and qualified to act on his own initiative.

In contrast to the military principle of the concentration of forces, the exigencies of police service required that each individual represent the arm of the law to law-breakers, and the friendly hand of service to law-abiding citizens. Responsibility placed on individuals gave rise to the process of selection, training and discipline used by state police.

History of the Organization

The history of the development of the New Jersey State Police offers a concrete example of enforcement methods that have proved reliable in the past and are still fundamental in a more complicated structure of society.

Before World War I, the inhabitants of the rural sections of New Jersey appealed to legislative representatives for more adequate police protection. Proposals that a state police force be established were opposed and defeated, however. After the war, these appeals from rural New Jersey were renewed. Finally, after exhaustive research and study, after advocates and opponents had aired their views, there evolved an organization designed primarily to protect the inhabitants of rural areas.

The new law vested in the state police officer all the authority previously given to various police officers. The state trooper was designated as a peace officer with state-wide jurisdiction. He was empowered to enforce state law and local ordinances, to act as motor vehicle inspector, fish and game warden, to protect the forests and even to give succor to the needy.

It was obvious to the first superintendent, General H. Norman Schwarzkopf that members of the state police would have to be carefully selected and trained to perform these various duties. In addition, it was necessary that the trooper have a high sense of loyalty to his organization and an understanding of his relations to the public. The record of the long and bitter struggle to establish the organization was convincing proof that this new representative of

the state could show no arrogance to nor contempt for the law-abiding citizen. On the contrary, he would have to be a servant of the public. So began the method of selecting members by competitive examination and preparing them for duty by pre-service training and in-service probation.

The first training class consisted of men who had qualified in a stiff mental and physical examination. Following this they were subjected to a strenuous three months of training. Those withstanding these tests went into their probationary period of duty as the first representatives of the state police. Of the hundreds of applicants, only a small group after a few months remained.

To the public, the state police were to remain for some time an untested theory. Those who had supported the organization were waiting for results to justify their action, while on the other hand the opponents were waiting for false moves to renew the controversy between state and local enforcement.

But the surveys conducted had indicated a definite need for police protection in the rural areas and a fertile field of operation was found. With zeal and enthusiasm the men of the new organization went about their duties quietly and efficiently and the inhabitants of the rural areas soon began to recognize their services. The changing conditions being brought about at that time by increased motor transportation were affecting life in the rural areas. The inadequacy of the old methods of law enforcement and the need of the new to cope with the changing problems were slowly recognized. Gradually, voices of praise were raised for the state police.

Then followed a few years of adversity that caused the administrators to recognize a need to continue the responsibility for the reputation of state police in the hands of carefully selected, carefully trained personnel. Years of hard work thereafter have brought realization of the need for state police and have wrought a reputation for high efficiency.

Current Status of State Police in New Jersey

Time has also brought changes in police methods. The little organization of 1921 has increased to more than 400 members and its range

of responsibility has extended with the years. The New Jersey State Police today performs a diversity of duties. The basic problem is that of providing general police protection to the people of the rural areas. Closely allied is the rendering of assistance to small police departments adjacent to state police areas. The organization also specializes in preventing and investigating crime.

The traffic problem is a challenge to agencies engaged in making highways safe. While primarily concerned with traffic on state highways, the state police must give attention to the network of county and local roads within its jurisdiction. Recognized as an agency of service, it is called upon to aid in accidents that range from those involving the individual to catastrophies menacing the lives of great numbers of people.

During World War II, the state police was the central agency which coordinated the police services in civil defense and is again taking part in the preparation of civil defense plans. Its special activities include assistance to the various agencies concerned with the enforcement of regulatory measures. Technical and scientific services such as identification, criminal information, scientific crime detection laboratory, inter- and intra-state communications, which are a part of the whole police system and must be provided to the local agencies, have become responsibilities of the State Police.

New Jersey Plan of Organization

The structure of the organization has been changed at various times through the years. Recently a complete reorganization was effected to prepare for the handling of the police problems of the post-war period and to bring the organization into line with overall state reorganization. Based on a new Constitution approved in 1947, the departments, bureaus and commissions of the executive branch of government have been brought under the control of fifteen major departments.

One of these is the Department of Law and Public Safety composed of the following six divisions: Law, Professional Boards and Agencies, State Police, Motor Vehicle, Alcoholic Beverage Control, Weights and Measures. Governor Driscoll regards this part of state

reorganization as the mobilization of the state's law enforcement agencies. Attorney General Theodore D. Parsons, head of the new Department of Law and Public Safety, is engaged in developing a compact, smooth-working organization.

Concurrent with the overall reorganization, and as a result of

years of study, the Superintendent of the State Police has effected an internal reorganization to establish a basic structure of organization and new procedures consistent with existing problems. This reorganization includes a rearrangement of the headquarters staff, the organization of service commands, including the State Bureau of Identification, the Communications Bureau, the New Jersey State Police Academy and a Service Unit for supply and maintenance. The police commands formerly composed of three troops have been changed to two region commands, each commanded by a captain. The region is composed of districts, each commanded by a lieutenant. The district is composed of three or more state police stations.

Methods of Selection and Training

Notwithstanding the developments since the original organization, the careful selection and training of the trooper for his duties continues to be a matter of paramount concern.

The first step in the process of securing personnel is the competitive examination designed to select only those who have the mental and physical capacity to perform state police duties and the background and reputation to command prestige as a representative of the organization. Applications are received from men in all walks of life between the ages of 22 to 35.

All applicants are required to take a written examination to test their powers of reasoning and judgment, attention to detail and general education. While there are no set educational qualifications, experience has proved that the average educational level of the successful candidate is that of high school graduate. The candidates who successfully pass the written examination are then required to take the medical and physical examinations, both of which are used as means of elimination. The applicant who passes this series of examinations appears before a board of officers for interview. When cleared, he is thoroughly investigated in his own community. If his character and reputation are above reproach he is eligible for appointment to the training course.

The pre-service course of training is based on the same principles as it was when the organization was first started in 1921. New

methods of police work are incorporated in the course. A primary consideration in laying out the pre-service course of training is to gear it to actual operation. While the recruit must be integrated into the organization, understand its policies and methods of operation and conform to its discipline, he must be prepared to confront any situation alone and act on his own initiative.

The training course provides for a balanced three-sided development—the physical, the mental and the moral. The rigors of state police service are such that only men of physical stamina are able to withstand them. The diversity of duties requires a knowledge of basic law and of the varied techniques of law enforcement. The service is such also that strong moral fortitude is required.

The course of training is purposely made difficult in order to put the individual to a real test. While he is given every opportunity to develop, the applicant who falls below the established standards at any point in the three months' course is eliminated.

The course serves only to lay a foundation for future development, and the most practical and direct methods of instruction are used. Lectures, illustrations and demonstrations, application by the student, examination, correction and discussion are training techniques.

A strict discipline is maintained throughout the course. For the first five weeks, the recruit is confined to the Academy. Thereafter he is given short week-end passes. The training day begins at 6 a.m. with reveille and ends with "lights out" at 10 p.m. After the strenuous day of classroom work, demonstrations and physical exercises, the recruit finds it necessary to spend the limited free time given in the evening in writing up his notes and studying the next day's assignment.

The end of the arduous course is marked by the graduation ceremonies at which the men who have withstood the test are given their oath of office, uniform, badge and equipment. The appointees are then assigned to road duty. There follows a nine months' probationary period. This is the practical test of the individual's adaptability to the state police service. During that period he is under the supervision of superiors and older men in the service, all of whom have followed the same course.

There is more to making good than the grasping of the police techniques. The recruit must prove his amenability to discipline, his interest in his work, loyalty to the organization, ability to work with his fellow officers and an understanding and ability to handle the public.

Various subjects in the course of training are devoted to the handling of the public in all anticipated situations. Generalizations can be made but every situation presents its human problem. Without further test, the organization cannot be assured that the new recruit will make the proper adjustment to the responsibility and authority of his office. Every three months he is transferred to a new station and the commanding officer under whom he served for the period gives him a confidential proficiency rating. If the rating is below the required standards, he is given opportunity to make correction of the deficiency. But the responsibility is placed on him to make the correction. Recurrences are not tolerated. At the end of the probationary period and again at the end of two years' service his record is carefully examined to determine whether he should be continued in the service.

Permanent Tenure

After five years the trooper is given tenure and cannot be removed from office without cause and a hearing. But the rules and regulations strictly govern his conduct throughout his service in the organization and infractions thereof subject him to trial similar to the court martial used in military service.

This rigid procedure acts as a safeguard for the organization and for the public. Experience has proved that cases requiring disciplinary action are limited. This is attributable to the careful process of *selection and training.*

The state police organization is operated on the theory that every phase of police work requires courtesy on the part of the officer and that courteous treatment brings its reward in the form of public confidence. The role of the state trooper is to protect life and property and safeguard the rights of the individual citizen. As the structure of society becomes more complicated, regulatory measures are in-

creased. In the enforcement of these measures the public may lose sight of the real purpose of the police.

The enforcement of the motor vehicle laws is a striking example. The ever increasing danger on the highways, the toll of injuries and deaths in accidents make enforcement a necessity. But the law must be administered with judgment and courtesy or the public gains the impression that the enforcement programs are designed to hinder rather than to aid.

With the increasing responsibility for the policing of the highways, the state police has adhered strictly to the policies of courtesy and fairness. Traffic enforcement programs are designed to prevent accidents but the programs can only be effective by the proper performance of duty on the part of the individual trooper.

Recently the local traffic courts in New Jersey were reorganized and a "no fix" traffic ticket is now in use by all police departments. Chief Justice Arthur T. Vanderbilt in discussing this reorganization has stated that it is based on the theory that the public must be educated to respect the law, that all men are equal before the law, and that there must be uniformity in traffic-law enforcement. These are theories the state police have endeavored to put into practice in all of traffic-law enforcement.

With the development of the new system of courts, the reorganization of the Department of Law and Public Safety and the internal reorganization within the state police unit, study is being given to the extension and improvement of the training methods of the individual trooper.

The New Jersey State Police Academy is being extended to include organized in-service training courses for members of the state police. In addition, other law enforcement officers of the state will be trained at the Academy and its facilities will be offered to the local police departments.

While many methods of public relations are today being employed, the state police organization continues on the theory that no device or method could be more important than the careful selection and training of the trooper to enforce the law courteously and impartially.

Effective Use of Driver Licensing

A. F. TEMPLE

Major Temple has been chief of the Drivers' License Division of the Texas Department of Public Safety since 1945. He entered the Department of Public Safety's training academy as a "rookie" patrolman on August 2, 1937. After two years as a patrolman, he became an Examiner in the Drivers' License Division. In 1942, he was promoted to the rank of Sergeant-Supervisor and placed in charge of a Drivers' License Field District. A few months later he became Chief Examiner of the Drivers' License Division and was put in charge of all field operations. Chief Temple served as Chairman of the American Association of Motor Vehicle Administrators' National Committee on Driver Licensing during 1947 and 1948. Prior to that time, he served as a member of the committees appointed by the Association to develop standards on "The Selection and Training of Examining Personnel" and to revise "The Standards and Procedures for the Examination of Applicants for Driver Licenses." He has served as an instructor in the Association's annual Seminar since 1945, in addition to working with the American Association of Motor Vehicle Administrators in conducting training schools for examining personnel in Colorado and Oklahoma.

THERE are those who argue that maximum use of traffic control in the last ten years might have reduced our motor-vehicle death and accident-toll by more than 50 per cent. Unfortunately many states had no comprehensive control-program ten years ago and still have no adequate means of treating the affliction of accident-prone drivers.

For several years it has been known that relatively few of our sixty million drivers are responsible for a *great majority* of our traffic difficulties. Until recently, however, little had been done to identify and segregate them, and to apply special treatment to this problem-group.

Driver licensing, as a control measure, provides a logical and direct approach. The operation of a motor vehicle has been defined by the higher courts as a *privilege* granted by the state only to those able to demonstrate certain basic qualifications. The privilege may be withdrawn at any time when the driver shows evidence of having become dangerous to other lives and to others' property.

Driver-licensing administrators and others connected with the traffic control program have been severely criticized for permitting the death and accident toll to reach its present level. Certainly more than 30,000 lives annually are a terrific price to pay for highway transportation facilities provided in response to public demand. Yet the American public, while clamoring for immediate corrective action, must shoulder part of the responsibility for inadequate traffic control methods. The public itself has been reluctant to accept additional regulatory measures or to provide necessary legislative action to establish basic laws and supply the physical facilities with which to do the job in our rapid transition from slow, uncomfortable travel to speedy, luxurious transport. As a result, "modern" driver-skills and most traffic control measures are twenty-five years behind today's powerful motor vehicles and super-highway systems.

Broad Aspects of Control Program

The burden of checking the upward trend in traffic accidents lies squarely upon the shoulders of those charged with the administration and enforcement of known control measures. It is imperative that those responsibilities be recognized and assumed without loss of time if public officials connected with the traffic-control program are to keep faith with an aroused public demand for immediate action. Quick results require that ineffective, outmoded methods be replaced by streamlined and up-to-date procedures to apply maximum corrective treatment directly to the relatively small proportion of drivers responsible for the great majority of traffic accidents. The scope of the problem is so broad that maximum use must be made of the theory that the least governed are the best governed.

Fortunately, from the administrator's standpoint, a majority of the drivers in this nation are conscientious law-abiding citizens whose attitude and basic qualifications need no special attention other than to acquaint them with the rules of safe operation established by traffic laws. A good public educational program for all drivers, experience has shown, will solve the problem for this particular group.

Adequate enforcement backed by a good system of traffic courts

not only deters potential problem-drivers; it effectively corrects the attitude and careless driving habits of another large group of motor-vehicle operators who find it costly in dollars and cents to infringe upon the rights and privileges of others through disregard of traffic regulation. Even though this particular group of drivers requires additional attention, they should not be placed in the category of problem-cases unless the offense is one of the extremely dangerous violations that might result in a jail sentence.

The 10 to 15 percent of all drivers who, after educational and enforcement programs, continue to violate traffic laws and become involved in accidents, constitute the serious problem-group. Against this group more rigid corrective measures must be brought to bear. In each case where individual attention and less severe corrective methods fail to produce the desired results, the driver must be deprived of the privilege to operate a motor vehicle.

Admittedly, such a control program will in some states require more adequate basic laws, additional personnel and better facilities than they have. But the aggressive administrator should encounter no great amount of difficulty in obtaining these necessary tools if he will direct into the proper channels an aroused public's demands for immediate action.

The time has passed when excuses will be accepted for lack of an adequate control program that is the only known way to prevent a relatively small number of problem-drivers from killing 30,000 and injuring hundreds of thousands. By the very nature of the problem, a great deal of the responsibility for its solution has been placed on the licensing agency.

The Development of Highway Transportation

Even though American citizens are recognized as progressive, farsighted individuals, it is conceivable that those who watched the "mechanical contraption" move under its own power that Sunday afternoon shortly before the turn of the century did not anticipate the revolutionary changes in transportation nor the problems that would develop from the invention. Few, if any, were convinced that this machine that clattered, backfired and belched smoke would

ever become practical as a major means of transportation. The editorial the following morning, describing the event as a "trial run of an invention of the devil" referred to the day's performance rather than to a prediction of developments that would lead within fifty years to the death of more than 30,000 persons annually.

As engineering improvements were made in the motor vehicle in response to demand for faster, more convenient transportation, it became apparent that maximum benefit from the new invention demanded an adequate system of roads. Then began a furious race between the engineers of the automobile industry and those of the states in a continuous effort to develop better and safer motor vehicles and highways. Within a comparatively short time, improved production methods so reduced the cost of the motor vehicle that the average citizen was able to purchase one and take advantage of better roads.

The traffic problem in its simplest form became apparent shortly thereafter, but little attention was given the matter other than to the passage of a few basic laws. Thus, the opportune moment for beginning an adequate driver-education-and-control program was overlooked. Such a program begun early would have meant the difference between life and death to tens of thousands of persons. The time to start it passed unnoticed in the effort to provide better highways to accommodate the ever-increasing number of vastly improved motor vehicles supplied in response to public demand.

Theory of Driver Licensing

The specific responsibility of driver licensing in the overall traffic-control program is clear cut and well defined. In order to obtain maximum results in the administration of such a measure, there are three essential functions to be performed.

First, definite standards and examining procedures must be adopted to prevent granting of the driving privilege to persons not mentally or physically qualified to operate a motor vehicle safely. Secondly, a permanent driving record must be established for each licensee: subsequent convictions of traffic law violations and acci-

dents in which the individual is involved must be recorded thereon for the purpose of identifying and segregating the minority group of all drivers responsible for the majority of traffic accidents.

The third and most highly important phase is the development of a procedure to correct the attitude or faulty-driving habits of the licensee whose record indicates that he has failed to observe the traffic laws of the state on numerous occasions, or, for other reasons, has operated a motor vehicle in a manner that endangers lives and property.

The human element is the primary causative factor in practically all traffic accidents. It is consequently logical to assume that the most direct approach is control of the driver. Adequate driver-licensing backed by enforcement prevents many potentially dangerous persons from becoming drivers. Centralized driving-records enable the administrator to spot a problem case and apply corrective treatment before the licensee becomes incurable. License suspension can *remove* from streets and highways many drivers who have proved unqualified and dangerous.

Development of Licensing as Control Measure

Prior to 1910, a few eastern states had recognized that driving a motor vehicle was a privilege to be granted by public authority, but licensing was solely a means for collecting additional revenue. No effort was made to establish the license as a safety measure. From the precedent established by Massachusetts in 1904, additional states have from time to time passed driver-licensing laws in some form or other. Today, South Dakota is the sole remaining state that does not require a license of its motor vehicle operators. Each of the original laws provided for the licensing of any applicant, upon the payment of the required fee, regardless of physical or mental qualifications to exercise ordinary and reasonable control over a motor vehicle.

Shortly after the turn of the century, the first examinations for licenses were given but no definite standards or procedures were established. Each examining officer used his own judgment in determining whether or not the applicant possessed the necessary

qualifications for the issuance of a license. Ineffective as these early examining procedures may have been, they were the first step in developing driver-licensing as a measure of control.

Additional states provided for examination of certain drivers from time to time during following years, but it was not until 1940 that an effort was made to standardize such procedures within the state as well as on a national basis. Previously many drivers who had been unable to qualify for a license in one area had no difficulty in obtaining the privilege to operate a motor vehicle in the same state when his application was handled by a different examiner. An applicant who could not qualify for a license in his home state obtained one in a state that did not examine applicants or whose minimum standards were lower. He then presented his certificate to the licensing agency in his home state and received a license without examination.

Even less progress has been made in developing a way to identify and segregate the small group of unqualified and dangerous licensed drivers who require special corrective treatment. Outmoded procedures and inadequate space in the central office of the licensing agency has resulted in gross inefficiencies. Not only is the clerical work in renewing a license greatly retarded by the necessity for checking through complicated, poorly arranged files and cross-files, but the vital information pertaining to the licensee's driving record loses effectiveness.

The lack of up-to-date, centralized case history on each licensed operator permits thousands of drivers with extensive accident and violation records to renew licenses from year to year without question by the licensing agency. As a result, the average driver in these states has never become conscious of the fact that such records are maintained and may be used to classify him as an undesirable or dangerous operator of a motor vehicle.

Several states have for many years suspended licenses as a way to control the driver who has classified himself as a real problem, but even the most progressive of these suspension plans have barely scratched the surface in this most important part of the control program.On the other hand, many states have made little, if any, use of the authority to remove an individual from streets and highways

when his operation of a motor vehicle becomes a danger to public safety.

In far too many cases, habitual violators and accident-prone drivers have continued to take a terrific toll of lives and injuries in traffic accidents simply because the licensing agency has not assumed responsibility.

These conditions lessen public respect for licensing as a control measure, create resistance to efforts toward needed improvements—and lessen drivers' respect for the privilege of driving. The driver in general looks upon the license certificate as a convenient piece of paper that will keep him out of trouble in case he should become involved in an accident.

In some states where these conditions exist, the basic law is adequate and the necessary personnel and facilities have been provided. But the licensing agency has been used as a political football or is looked upon as a necessary evil by the administrator who has bogged down operations through the assignment of inefficient and unqualified personnel. In other states, the licensing of drivers has been given an inconspicuous place in the overall traffic control program and no attempt has been made to secure the essential tools for improvements because of the additional duties and responsibilities that must be assumed in any progressive undertaking.

Despite the deplorable condition in a few states, other states in the last ten years have made rapid progress in driver-licensing. More than three-fourths of the states now examine drivers. Most of them equal or surpass the minimum standards recommended by the American Association of Motor Vehicle Administrators in conducting such tests. More encouraging still is the information that more than 350,000 motor vehicle operators lost their license through suspension action during the calendar year of 1948, after other corrective measures had failed to produce the desired results.

Responsibility of the Public

Since driver-control is a function placed upon the motor vehicle administrator and other public officials, the support and cooperation of a majority of the citizens is essential if maximum results are to be

achieved from the program. Too often in our democratic form of government, the loud cries of a minority group overwhelm the more passive tone of the masses. The time has arrived when the eighty-five percent of all drivers who will never become involved in serious traffic difficulties, must give the administrator their wholehearted and active support in his efforts to correct or remove the relatively small group of potentially dangerous or accident-prone drivers from our streets and highways.

This support must first be shown in a demand for legislative action that will provide an adequate basic law and budget and the necessary physical facilities with which to do the job. This group must also take a more active part in other fields directly related to an improvement in traffic conditions. Prosecutors and judges who are qualified and interested in traffic should be placed in those courts charged with the responsibility of handling such matters. Good drivers should welcome the opportunity of serving as jurors in traffic cases.

The organization and presentation of traffic programs in local civic and service clubs offers another means for the majority to assist in correcting the problem driver. The sponsoring of driver training courses in the public schools provides an excellent opportunity for citizens to assist in the development of better drivers.

A final responsibility of the public is to lend all possible assistance to those public officials who put forth a conscientious effort to produce results in the traffic control field, and to demand the removal from office of all others.

The Administrator's Responsibility

The effectiveness of driver-licensing as a control measure depends to a large extent upon the manner in which the motor vehicle administrator discharges the responsibilities placed directly upon his shoulders. In most states, he has the final say as to whether or not an individual will be permitted to operate a motor vehicle upon the streets and highways. It is his duty to make maximum use of the laws, personnel, and facilities provided to protect all drivers from the unqualified and dangerous group afflicted with accident-proneness.

The policies and procedures adopted by him bear directly on results accomplished in reducing traffic accidents.

Rigid enforcement of the statute prohibiting any person from operating a motor vehicle on the streets and highways until he has been granted the privilege to do so by license provides the administrator with an opportunity to determine the applicant's qualifications before he begins driving. Adequate examining procedures and proper standards administered by well-trained and competent personnel will prevent the unqualified applicant from becoming a problem case. A good examining program carried on by a staff of courteous and efficient specialists not only eliminates the totally unfitted but has a marked effect in up-grading drivers generally.

1. A study of the Handbook in preparing for the test increases the driver's knowledge of traffic laws and rules of safe driving.

2. The contact with an examiner offers an excellent opportunity to influence the driver's opinion of an officer and the state he represents.

3. A thorough and rigid examination impresses the driver with the responsibilities placed upon him, and also creates within him a greater respect for all traffic laws.

4. Many applicants with visual defect are improved through fitting of proper lenses and become safer drivers.

5. The applicant's knowledge of the meanings and purposes of standard highway signs, signals, and road marks is greatly improved.

6. Physically handicapped drivers are caused to compensate in some measure for their disabilities by the installation of special mechanical equipment on the vehicle.

7. An opportunity is offered for the Examiner to point out minor faulty driving habits and offer suggestions for improvement.

The administrator must establish an up-to-date record system staffed by properly trained personnel if he is to obtain effective results in identifying and segregating the problem drivers that require special treatment.

An individual record must be established on each driver at the time he is licensed. To this must be added a report of any accident or moving traffic violations in which the individual is later involved. The driver's entire record must be in one file at an easily accessible,

centrally located point. Highly desirable also is a comprehensive system of flagging the record of any driver who shows evidence of becoming a problem case. Thereafter, differently colored flags should be assigned to designate how serious the case has become.

The final and greatest responsibility placed upon the licensing agency is handling the driver who has classified himself as having reached this problem stage. For all persons who have committed traffic offenses punishable by a jail sentence the driving privilege should be suspended immediately.

Lesser offenses call for less severe corrective action up to a certain point. For example, many drivers who have committed only two or three minor traffic offenses during a twelve-month period can be corrected through a letter from the administrators advising him of the record being built.

The second approach in cases when the driver fails to respond and commits an additional traffic offense in a short period of time, may be an interview with a representative of the licensing bureau. From this personal contact, the administrator is able to determine whether or not there is a chance to rehabilitate the driver or if suspension action appears to be the only solution.

In far too many cases, the administrator finds himself in the position of the one doctor in a community of 2500 citizens who is called upon to treat contagious disease and immunize those who have been exposed. Traffic conditions are such that the administrator has little choice other than to follow the procedure used by the medical profession in controlling such a disease. The accident-prone driver must be removed from the streets and highways immediately through suspension action, and those who are showing symptoms of developing the illness must be inoculated and kept under careful observation.

More than 30,000 lives annually are too great a price for the privilege of using our highways. The administrator who is not willing to accept the responsibility of applying direct and adequate corrective action to prevent this slaughter should step aside and make room for someone who *is* willing.

Ways in Which Traffic Situations Concern Chambers of Commerce

JOHN T. SOLTMANN

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ANY problem bearing on the economic welfare of a community becomes an interest of organized business as represented by the chamber of commerce movement. That is axiomatic.

Few will disagree with the statement that the advent of the automobile has brought us challenging problems of traffic control, safety, and parking. As a nation on wheels, our entire economy is closely linked to the motor vehicle.

On the one hand we have the problem with its economic implications. On the other are the interest and obligations of organized business to contribute toward an effective solution.

There is no intention to explore here the technical aspects of the problem—traffic studies, off-street parking, traffic control, research, meters or highway planning. These matters and dozens of others are effectively dealt with by many competent and recognized agencies in hundreds of factual and illustrated reports prepared by experts. The files and library of the Eno Foundation bulge with material of this character.

Instead it is proposed that we undertake an examination of the local chamber of commerce approach, particularly as related to those situated in the Northeast. A comparison of traffic and parking activ-

ities of chambers of commerce in one section of the country with those in another section would, in the writer's opinion, show little variance in scope or quality of performance. All direct references in this article however will in accordance with the request of the editors, bear on the work of organizations in the Northeast. Also, in fairness to the many chamber executives who supplied information concerning their associations' activities in this field, specific town reference will be avoided. Space would not permit complete or adequate coverage of all data sent in by cooperating friends.

One cannot examine reports of chamber of commerce traffic and parking activity without concluding that solutions to many knotty problems were brought about through intelligent planning, sound research, and finesse. This latter term covers a "multitude of sins," and yet it is the one aspect of organization work on which we most frequently stub our proverbial toe.

This is particularly true of any project that involves not only general community acceptance and understanding but also, and more importantly, the action of a governing body—local, county, or state. The most successful civic organizations are those that recognize the wisdom of acknowledging that the other fellow's judgment can be as sound as their own and yet be diametrically opposite for good and sufficient reasons.

Problems and Approaches

Let's look at specific points that might be considered basic and typical of the chamber of commerce approach. Having established the existence of a problem either in parking or in traffic, the directors of the chamber authorize the appointment of a committee to study the matter and bring in appropriate recommendations.

As one Secretary puts it, "The make-up of this committee was important, because the Chamber anticipated opposition from several quarters and was anxious to have a well-prepared, carefully considered proposition that could stand up under searching analysis and criticism and could be defended with complete confidence . . . ."

He reports that personnel was carefully selected from among retail merchants, manufacturers, realtors, bankers, utility officials

and so forth; in short, a good cross-section of the business community. Invitations to serve in an advisory capacity were extended to the City Engineer and to a representative of the traffic bureau of the police department. Other city officials were from time to time invited to sit in at meetings.

Another executive reports that his committee is composed not only of chamber members but also of several municipal officials—city engineer, President of the Board of Public Works, Commissioner of Traffic and Police Captain in charge of traffic enforcement.

The time element represents a fundamental aspect of successful chamber work in all its branches. Seldom is any sizable project undertaken that does not run into long months and years of study and promotion. Especially is this true of activities relating to traffic and parking. There is a strong desire to see a task brought to fruition, but the danger of failure is ever-present when hasty action is taken, and every failure makes the goal harder to attain.

According to one correspondent, the failure to solve the parking problem in his community could be laid to the un-coordinated efforts of various local groups that lacked proper direction and lacked recommendations worthy of official recognition. Subsequent work of a local chamber committee has proved successful but costly from the standpoint of time—five years of almost continuous effort.

Poorly prepared plans, inadequate supporting data, and weak arguments of questionable value are held out as reasons why a fairly sound solution to a parking or traffic problem frequently runs into opposition.

Attempts at survey work that recognized engineering authorities should undertake frequently result in this inadequacy and should of course be scrupulously avoided. "Our Traffic and Parking Committee," one chamber spokesman writes, "does not set itself up as an expert authority in city planning. After long consideration of the issue, it has proposed that a disinterested specialist in the field of traffic and city planning be employed to recommend the solution."

Selling the finished product will more than likely be as big a job as the study and preparation of the final recommendation. Newspaper support is essential and all community groups should be given full particulars. It is of course assumed that the local city officials at this

point have already been "sold" and are thoroughly in accord with the proposal.

A Full Case History

One particularly successful chamber recognized that its community was making little progress toward solving its traffic and parking situation. The chamber set up a committee and began an intensive study of the problem. That was years ago. Its effort brought immediate results along the following lines:

1. The local authorities re-established a Traffic Commission.

2. City and state were encouraged to make a joint survey of traffic conditions, a major portion of the cost being borne by the Chamber.

3. A recommendation that a full-time traffic engineer be employed by the city was approved by the governing body. That official is now a member of the Chamber's committee.

4. The committee itself made a special survey and located several desirable spots for off-street parking. One is now being readied for service.

5. Pocket maps showing routes to and from the city as well as the streets in the downtown section for the use of tourists were published and widely distributed.

The Chamber itself actively supported a plan of one-way streets in the central business area. The new arrangement is now in effective operation. As an added aid, the chamber distributed large quantities of maps designating the changes made.

Convinced that off-street parking lots are an essential instrument in meeting the needs of the shopping district, a special study committee consisting of the foremost property owners in that section was formed. Members of this committee fully realize the economics of the matter and see in their efforts an opportunity to preserve property values and protect trade.

Another chamber, in an analysis of this latter problem in its community, reports that from surveys made by local merchants it was found that many customers from outlying areas no longer did their buying in that town because of the inadequate parking facilities. Careful estimates indicate that 10 per cent of the total trade that

normally came to this community had gone to other better-regulated shopping centers.

In the report is this additional observation of what is happening within the community itself:

"A study of the rapid rise of 'Minor' Street as a secondary shopping center, is evidence that more expansion is taking place outside the main downtown business section than i. it. The multiplication of business in that area is nearing the saturation point, and a parking problem is arising in the sector.

"One example of the trend away from major downtown expansion is found in the building of a super-market on 'Minor' Street which wisely provided parking facilities for its customers. Its volume of business is sensational, and downtown grocery and meat stores have suffered accordingly, by the dissipation of trade away from the acknowledged center of the grocery trade, the market-house area, etc."

The off-street parking question raises two fundamental points. Some hold that the providing of parking facilities is as much a governmental function as the maintenance of public streets and the regulation and control of traffic. It is contended that the furnishing of adequate off-street facilities stabilizes central district property values and that the city obviously will benefit in its tax collections. Some cities which operate their own parking facilities justify their action on the grounds that they are protecting a major source of municipal revenue.

Because municipal operation and ownership require the right of condemnation, the right to levy assessments and subsidize parking developments, special enabling legislation is usually necessary. In many states we find chambers of commerce engaged in joint efforts, as they so frequently do in other unrelated matters, to seek passage of the necessary law.

One chamber reports in a recent bulletin that "to overcome this situation (the lack of law to permit municipal ownership and operation) the Chamber's Parking Committee last week invited representatives of twenty-six cities and towns to attend a meeting at the Chamber offices. The large attendance at the meeting indicated the wide interest other cities have in solving this acute problem."

Mayors from five cities attended in person. Other cities sent legal representatives or traffic engineers. Chambers of Commerce throughout the state were well represented by their Traffic Committees or executive heads. Those attending agreed that some type of state legislation allowing municipalities to establish and operate parking lots must be passed by the next General Assembly. After discussion of various types of enabling legislation, a five-man committee was selected to draft a bill that would meet with the approval of the cities and towns represented.

Private Enterprise Is Favored

Another school of thought holds that all off-street parking should be provided by private enterprise. These advocates say no public obligation is involved. They argue that if public parking facilities were provided, the benefits would accrue largely to much the same group day after day. They say that we operate under the American system of free enterprise, that private business should be encouraged and public ownership discouraged.

The private lot is still the most common means of providing off-street parking in many communities; in at least one case we have details of a local merchant-sponsored corporation to acquire centrally located property for parking purposes.

Last summer a special committee representing the Chamber's Retail Merchants' section announced the organization of the corporation and offered $200,000 of its stock to mid-city retailers and property owners. Stock sales amounted to approximately $85,000 and through the cooperation of a number of local banks the group secured a mortgage of sufficient size to complete financing. It is expected that after the lot is in actual operation, additional stock can be sold to reduce the mortgage. Regardless of its ability to sell more stock, the corporation is committed to an annual amortization of 10 per cent.

The corporation's prospectus describes the plot to be acquired as containing better than 42,000 square feet. It is estimated that space will be provided for 187 cars with a probable twice-daily turn-over.

All-day parking will be discouraged by offering very low hourly rates for the first and second hours and a considerably higher rate for all subsequent hours. Future plans call for decking the property and the acquisition of additional sites.

Much has been written about the use of parking meters. Many chambers of commerce have for years engaged in efforts to have them installed in their communities. Suffice it to say here that meters are now in use in more than 1500 cities and towns throughout the country. Significantly enough, and to an increasing degree, parking meter funds are now being earmarked to help finance off-street parking facilities.

Good public relations always play an important part in the work of a chamber of commerce and it is interesting to note, with respect to activities of this particular character requiring official government sanction and action and general public approval, that those organizations that use "finesse"—intelligent know-how, good public relations, or whatever you choose to call it—succeed in their efforts more frequently and far more quickly.

"Best Public Relations Job"

An example was described by a fellow secretary in a nearby town. His Parking and Traffic Committee recently sponsored a dinner meeting at which every officer, sergeant, lieutenant and captain, engaged in police traffic work were guests. At the meeting, the businessman's stake in the local problem was thoroughly explained to these officials. The meeting was then turned over to the police guests for suggestions as to what they thought could be done. "This," writes the secretary, "was the best piece of public relations work we have ever done in municipal affairs. The Police Department was honored to feel that businessmen recognized the important work being accomplished. Excellent suggestions were forthcoming that night. They were worked on by our committee and many put into effect. The plan is now in process for setting up a suggestion system rewarding those policemen who contribute the best ideas monthly."

The same chamber makes it a point to maintain liaison with the

local police department by having a sub-committee that works in conjunction with the authorities in servicing traffic and parking complaints.

There seems to be a definite trend away from special consideration for overtime parking violations of visitors and shoppers. Yet the opportunities to gain good-will should not be overlooked. One novel approach where meters are used consists of an envelope with the following wording that explains the process:

> *As a courtesy to customers unavoidably delayed, a Hometown Policeman has deposited a nickel in your meter.*
>
> *A policeman is only permitted to deposit one nickel for the same car on any given day. When this time has expired a parking ticket will be issued. This courtesy has been extended by the Hometown Merchants. If you appreciate the service, please return the nickel to them in this envelope.*—CHIEF OF POLICE

The plan here described was put into effect last December and indications are that as a result of the good-will created, it will be made a permanent practice.

Another chamber reporting on the setting up of a local parking authority tells this story:

"It (the authority) was given no money for general expense, except $2,500 for a traffic study. We offered to fill in the gaps until it got going so we (1) do secretarial work for the board on request; (2) called a meeting of business leaders to hear a report from the authority and paid for incidentals in connection with the gathering; (3) furnished lunch money for 185 students who worked on a traffic count, and (4) will pay around $200 to a few engineering students who must do the preliminary tabulations not covered by the $2,500 provided by the city."

Printed literature generously sprinkled with clever cartooning, maps and charts have been used to good purpose in telling the parking story in several cases. Presentations intended to acquaint the general public with the facts are seldom worth the effort unless the

material prepared is clear, to the point, and easily read. The several leaflets examined meet this test exceedingly well.

Public Forum Has Proved Useful

The public forum has also been used to good advantage in securing general community understanding and acceptance of the problem and its proposed solution. In one instance, a sponsoring chamber listed some forty-four cooperating groups including service clubs, labor unions, colleges, trucking associations, fraternal organizations, and others. Traffic and parking together with two other subjects were featured on separate days over a ten-day period. During that period, special exhibits relating to each subject were set up and could be inspected during specifically designated hours.

Lack of space prevents a complete discussion of all the devices used to investigate and "merchandise" this all-important subject. Likewise, it is impossible to list related activities of chambers of commerce in the Northeast.

Such items as grade crossing elimination, through-streets, special truck routes, pedestrian aids, lighting, burning controls, pavement markings, traffic islands, traffic signals, street widening programs, relief highways, loading zone regulations, and a host of other topics are always part and parcel of either a parking and traffic committee's concern or whatever other committee seems most appropriate to the chamber involved.

Some chambers have Highway Committees, others Transportation Committees, a few have Planning Boards, some go in for Civic Development Committees, and still others a variety of combinations. The name of the committee seems relatively unimportant. What counts is that organized business through the chamber of commerce movement is geared to and does effectively assume its responsibilities with respect to these pressing problems.

Many opportunities are to be found within civic and business groups for effective promotion of better traffic and parking control. From the reports and letters received from a cross-section of typical chambers, both large and small, it is apparent that the business com-

munity not only recognizes its responsibility in this field, but is engaged in effective work seeking appropriate solutions.

From one letter comes this significant comment:

"So strong is the sentiment in our Chamber for a solution of the traffic problem, that for a number of years it has held the Number One place in our program of work, both by motion of the Board of Directors and by referendum vote of the general membership."

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